

Florida

Factory in the Pines
Don't Get Bugged

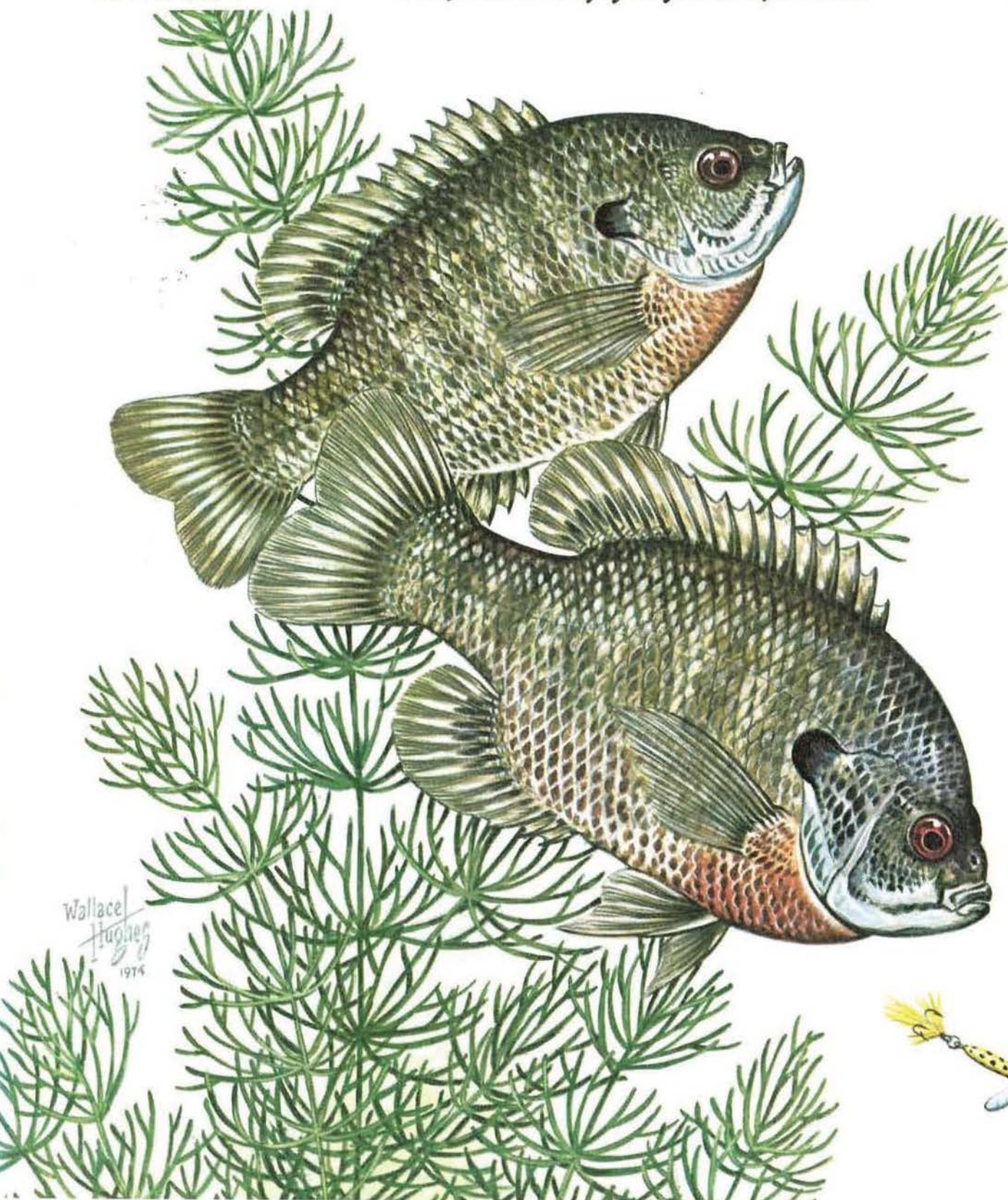
Fishing • Hunting
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WILDLIFE

APRIL 1974

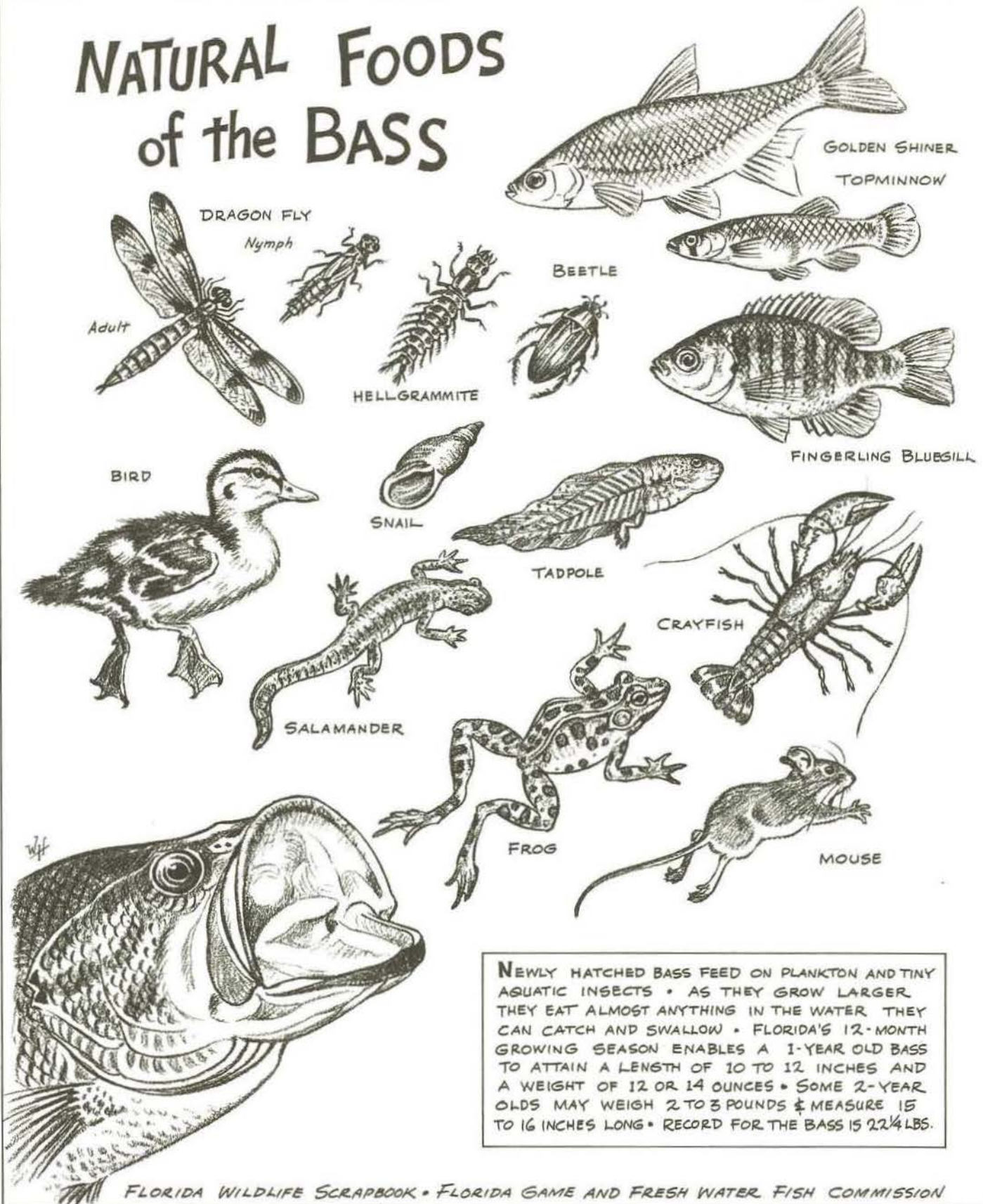
The Florida Magazine for all Sportsmen

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Florida Wildlife Scrapbook

NATURAL FOODS of the BASS



APRIL 1974

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State of Florida

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The Cover

A mainstay of Florida's fresh water fishing—that accurately, but only partly, describes the Bluegill. It is a favorite with anglers of all ages and with all grades of tackle from bent pin to fancy fly. See page 19.

From A Painting By Wallace Hughes

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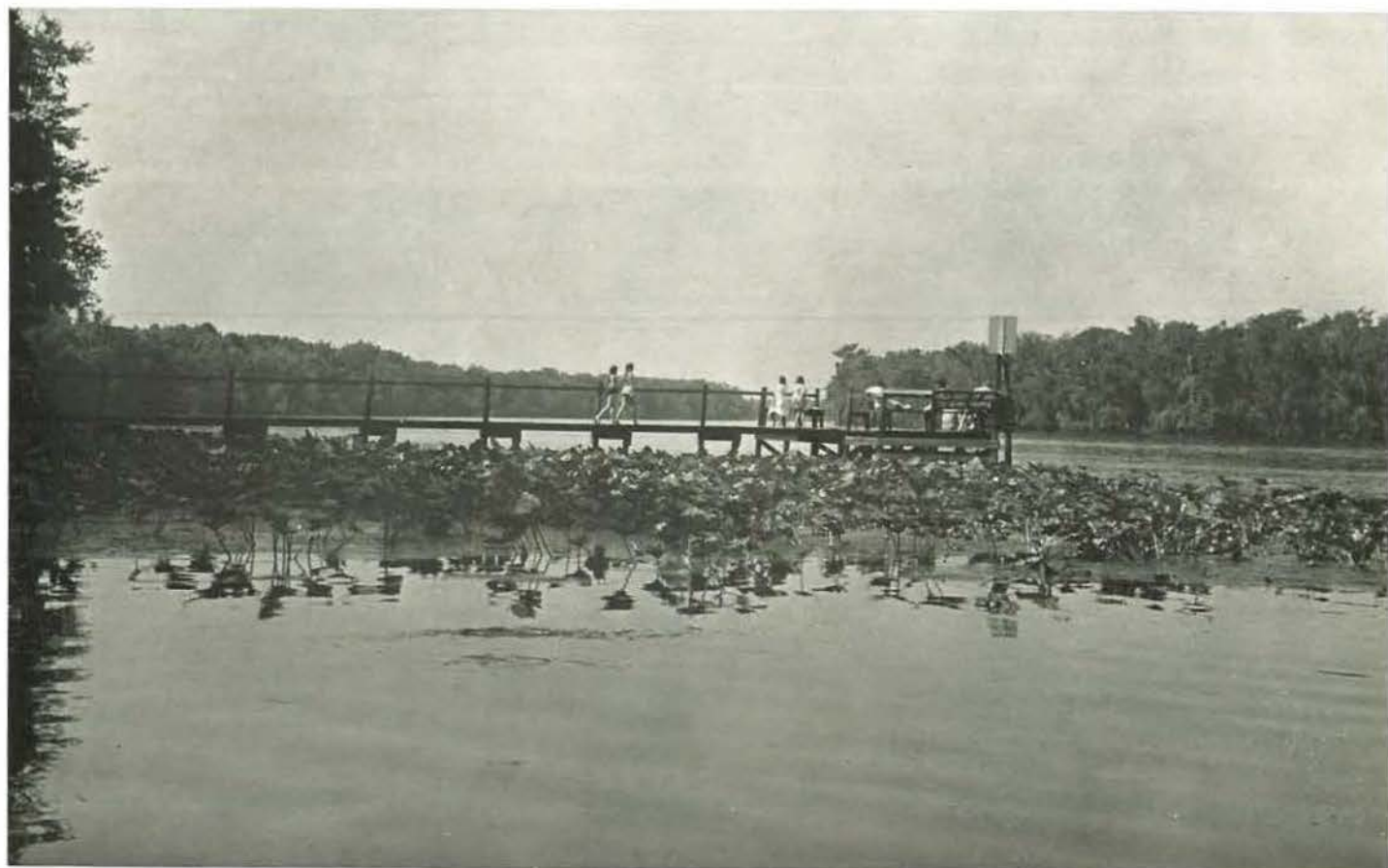
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tailored for campers, this
beautiful area offers a
variety of outdoor activities
in a magnificent setting

Manatee Springs State Park



FOR THOSE WHO LOVE the peace and quiet of the outdoors, Manatee Springs State Park, nestling quietly on the Suwannee River west of Chiefland, is a wilderness jewel midst Spanish moss-draped cypress and gum trees. It's an ideal location for a family outing or camping, far from the noisy confusion of the city, where the rumble of traffic is replaced by the calls of birds intermingled with those of children having a good time.

The 1,380-acre park is located on the east bank of the Suwannee river six miles from Chiefland, a small town astride U.S. Highways 19 and 98, on the Florida Gulf Coast, in the upper third of the gangling Florida peninsula.

Manatee is most popular during the warmer months—April through October, with the early spring and early fall being ideal from a temperature standpoint. During the middle of the summer it can get hot there, and during the middle of the winter it can get nippy.

However, for campers with heated RVs, the park is a natural all year around, being practically deserted during the cold months, except on weekends. As its fame is spreading, Manatee is also becoming a convenient stopping place for winter campers heading farther south in the fall, or reversing their route in the spring.

The nucleus of the park was donated to the State of Florida by the Levy County Land Company and the M&M Turpentine Company. Additional acreage has been purchased by the State.

Once remote, Manatee is easily reached today via State Road 320 from Chiefland. There's no problem in locating the park turnoff unless you're decidedly unobservant. It's hard to miss the signs.

As with most of Florida, Manatee Springs history stretches back for centuries. The springs were first used by the Indians, then by the Spanish, then by Seminoles and U.S. troops during the Indian Wars, and finally by the Confederates and Federals during the Civil War. William Bartram, the 18th century botanist, visited the area during his ramblings through the peninsula. However, there are few physical evidences remaining of the forgotten past.

The park is named for the manatee or sea cow, the hulking aquatic creature once plentiful in Florida waters, and years ago a seasonal inhabitant of the springs area.

During the 17th and 18th centuries, sea cows were abundant along the Sunshine State's Gulf coast, and in the Florida Keys. Cowpens Key was so named because manatees were kept there in pens prior to slaughtering for market. The sea cows once frequented the Manatee Springs run and boil to feed on masses of underwater vegetation. They were widely hunted for food when the white man came to Florida, and now are almost extinct, the few remaining in the state's waters being strictly protected by law.

However, in recent years the sea cows appear
(Continued on next page)

By **MAX HUNN**

The cool water of the run, above left, is guaranteed to elicit shivers from all but the most warm-blooded bathers. An 1800 ft. long walkway, following the spring run to its confluence with the Suwannee, is seen below left. Boating, right, is a favorite sport in the area. Both rental skiffs and canoes are available to visitors at Park.



Photos By Kit and Max Hunn

(Continued from preceding page)

to be making a comeback. Several have been seen near Manatee Springs, and a number in Crystal River, a few miles south on the coast. Jacques Costeau, the famous French underwater scientist, conducted studies of the manatees around Crystal River several years ago. But the manatees can hardly be rated abundant.

Today, no longer hunted, their greatest danger is being injured by boat propellers. They seem unwilling or unable to escape the props of high speed boats that hit them before they can escape.

Naturally, the Springs are the park's centerpiece, gushing some 70 million gallons daily. The water empties down a short run (or creek) into the nearby Suwannee River.

Swimming is not permitted in the spring boil, but you can take a dip in the run immediately below. It's a fine swimming hole, equipped with a modern bathhouse-refreshment stand, pier, and diving board. Small fry can wade and splash in a fenced-in area. How they love it! It's as good as making mud pies. You find the cool water puts zest in adult swimming, too, and if you don't shiver, you're indeed very warm-blooded.

Obviously, Manatee is tailored for campers, regardless of their type of RV equipment. The park has 100 campsites equipped with electrical and water hookups, tables, and grills. Nightly fee is \$4 a site plus tax. No more than 10 persons in one family can occupy a single site, and normally, stays are limited to 14 days, except during the off season. Laundry facilities are available.

Once your camp is set up, there're plenty of activities to keep you from getting bored. Swimming, naturally, ranks number one despite the chilly water. Skin and scuba divers particularly enjoy the waters in the run. However, divers must be wary diving in the spring run, for the boat traffic is heavy at times, particularly on weekends.

Boating, too, is popular with this water-oriented park. There are rental skiffs, but the majority of visitors bring their own boats, utilizing the modern concrete ramp located in the park. Once you're out in the main river, it's about 20 miles to the Gulf at the mouth of the Suwannee. You can also cruise upstream to Fannin Springs, or even farther, to Branford. The Suwannee from the Gulf to Branford is a wide, deep river ideal for boating. However, above Branford it has occasional shoals and rapids, and should be cruised only on high water. Even then, it's advisable to have the latest local river information.

The park boat dock actually serves two pur-

poses, being both a dock and a walkway along the spring run to the banks of the lovely river which Stephen Foster made famous (although he never visited the stream). The 1,800-foot boardwalk enables you to stroll casually through the moss-draped cypresses to a T-shaped observation platform on the broad river bank.

Freshwater fishing is good. You can catch bream from the boardwalk, a boon to small fry anglers with their cane poles. Suwannee River catfish are famous, and the largemouth black bass grow big and cautious. A Florida freshwater fishing license is needed. However, no license is required if you want to sample saltwater angling, only 20 miles away in the Gulf of Mexico.

When you tire of water sports, there are nature trails affording ample opportunities for peace and quiet. For the more athletically inclined, there're rental bicycles that will provide sore muscles even if you are sitting down.

Manatee also is a convenient base for exploring Cedar Key, a few miles southward and actually located in the Gulf of Mexico. You can drive to this quaint little town-in-the-sea via Florida 347. The state museum at Cedar Key provides an interesting glimpse of the area's long history. The town itself is a picturesque fishing village, and also a retreat for artists and those who just want to get away from it all. The waters around Cedar Key are famous for saltwater fishing.

As a get-away-from-it-all park, Manatee Springs has much to offer, and few forget the peace and quiet far from the madding crowd. ●

Photo By Kit and Max Hunn



Some 100 sites, equipped with electrical and water outlets, tables, and grills, offer convenience for the modern camper.

Think Small

Car top and light boats play a big role in Florida fishing—in fact, you may end up stowing your larger craft in favor of the lightweights



By CHARLES WATERMAN

I'VE BEEN USING some very small fishing boats for a long time, and although my requirements may be different from yours, I think I can help those just getting into this field. There's new interest because of the gas shortage.

The class I'm preaching about is for fairly brisk travel. It's expected to plane with two people, possibly three, and it should make 10 to 15 miles an hour. It doesn't take the place of a canoe in very small water or where silence is essential, but it is a pretty good substitute in most canoe water.

One of the most efficient combinations in this class is a 12-foot johnboat with an outboard motor of just under 10 horses. If you use a light trailer you can go on to a 14-footer. If you use a cartop carrier you'll probably be better off with a 12-footer. If you carry the rig in a station wagon or pickup truck, 14 feet will be a little awkward and a 10-footer is more convenient. I've used a lot of 10-footers but lean toward the twelve as a good compromise.

I have a 12-foot aluminum johnboat that's simply too heavy for convenient cartopping. I have a light trailer for it—the trailer costing more than the boat itself. I have another 12-footer made of light aluminum, and I carry it on top of a car or truck. I use both of them with a 9½-horse outboard. Frankly, the light one is a bit overpowered, and I have to tighten a rivet now and then. The heavy one would be safe with a somewhat larger motor, I think, but there's no call for it.

A 6-horse motor on either of these boats is fine with one person aboard; with two people it gets fairly slow but is good for small water. With a 4-horse motor there isn't enough speed for much travel although that's a nice engine for maneuvering.

Oars beat paddles for johnboats because of the shape of things. Since this is light duty use, I have pinned oars that can be ignored while you're doing something else. There are other oarlock types that keep the oars ready for use, but they really aren't necessary with such small boats. Electric motors work fine on these small johnboats, and although they're much better when attached to the bow of a bigger craft, the stern is okay when the boat's under 14 feet. Your freeboard is low, and there's little wind problem.

For long trips by car I like to have the johnboat

on top. For short trips the trailer is handier because much of your gear is already stowed and ready to go. The main disadvantage of the trailer is that it's so light it tends to bounce like the devil on rough roads—and such a rig is often taken on that kind. If you carry your motor in the towing vehicle (a good idea for really long trips), the bouncing probably won't make much difference. But if the boat's light and the motor relatively heavy, you can do more damage in a couple of miles of rough-road towing than you could crossing a calm ocean or two. Proper trailer support is essential to keep the motor from beating your transom off. I don't recommend trailering *any* ultralight aluminum boat with the motor clamped on.

Now my little trailer has 2-ply tires instead of 4-plys. They tell me I can run the lighter tires soft enough to give an easy ride. The 4-plys are so hard they bang the stuffing out of things on rough roads. Between you and me, I cringe a little when I look back, even with the 2-plys, on a washboardy sand road.

I hesitate to mention the actual gauge of aluminum used in these small boats. The really light ones are pretty thin. They shouldn't be dragged over rock and gravel, and will loosen up eventually if used with planing power—but may be just

(Continued on next page)

Nothing beats a little rig like this one for burrowing into rough country. Fishermen, below, follow a rumor of a hidden swamp lake.



(Continued from preceding page)

what you want for cartopping and toting into rampless creeks or ponds. If you're going to use a trailer exclusively, go for the heavy model.

I have carried these johnboats and prams a great deal in station wagons, in pickups, and in a Chevrolet Blazer 4WD. A 12-footer sticks out quite a piece in the rear, especially with the Blazer, and I use clamp-on taillights with it. The balance is a little touchy, but I can fasten the bow securely and load my heavy gear there. Balance is better if you load the boat stern first and then put your lights on the bow, but they don't clamp on so easily there.

Now although I have written mainly of aluminum boats, there is nothing wrong with fiber glass prams and johnboats. Generally, they run a bit heavier. They are quieter in the water. I use indoor-outdoor carpeting in the aluminum boats when convenient.

IN DEMONSTRATING THEIR RODS, some salesmen do terrifying things. There's this one where you just stand a light flyrod on its tip and push down from the other end. The bends look incredible, but remember that the rod is bending the way it wants to with the pressure. There's no "reverse snap" or "double bend."

Plenty of excellent rods have gone back to the maker with nasty letters because somebody hung up and, in trying to dance the lure loose, jerked one way while the tip was still going another. The actual strain on the stick was much more than if he'd pulled as hard as he could with both hands.

A well-meaning fellow came over to me while I was casting a fly.

"I don't think you realize how much you're bending that rod," he said. "You're going to break it."

Of course, the bend involved the entire rod and was really rather gentle.

Some of the best glass rods are more easily damaged than cheaper models because the makers have gone to thin walls in getting a particular kind of action. Usually, a light rod that has a large diameter near the butt has thin walls that are easily crushed by gasoline cans and anchors, no matter how beautifully it may cast or how well it may handle large fish.

A tackle dealer told me the other day that he no longer sells any rods with thin walls.

"Many of them are excellent for experienced fishermen," he said. "But most of my customers just drop things on them, bring them back, and raise hell."

LINE STRETCH CAUSES a lot of trouble, saves a lot of fish, and is widely misunderstood. Line should be limp, but not too limp; hard, but maybe not too hard.

It is line stretch that saves your fish when you



This is a neat, lightweight outfit for trawling to back-country spots. Boat is 12-footer; motor, 9½ h.p.

snub him too hard, but it is line stretch that busts your reel spool when it gets wrapped on too tight. You see, as it stretches it tries to go back to its original form, and when there are many layers of it on a reel spool, the pressure becomes tremendous.

Line has "memory," and that's what causes it to come off a spinning reel in loops unless it's been prestretched a little before you start fishing. When you stretch it deliberately, it goes back part way to its original length, but a little of the stretch stays in it.

A quick stretch has much less effect than one which lasts for a while. The longer it stays stretched, the less it contracts to its original form. It may be more effective to stretch it lightly for a long while than to pull it much harder for just a little bit. You don't want all of the stretch out, but if you stretch it a little you'll do away with many backlashes and spinning snazzles.

Braided line is less troublesome where "memory" is concerned. It has many strands, and they minimize each other's faults. In normal plug casting with lures weighing more than ¾-ounce, I can cast better with braided line. Some braided line is used for spinning, but most spin fishermen use mono. Most of the monofilament today is pretty well adapted to the job.

All line deteriorates through exposure to sunlight and through aging. It's often better to change moderately-priced line frequently than to stick too long with expensive stuff. A tackle store with a rapid turnover and bulk spools is a safe bet, even if the line isn't the most expensive kind.

I READ THE OTHER DAY that Mark Spitz' swimming coach can't swim. Unfortunately, proficiency in a sport doesn't make you a good teacher. Many a university has put out a lot of dough to hire a

coach because he had shown an ability to carry a football over the bodies of large and violent men—only to find out that the poor guy doesn't even know how he did it. The combination of superior performer and superior teacher is hard to find. Remember these things when you start to teach fishing to a beginner. No matter how expert you are, you must study teaching methods.

There's no doubt that the expert performer at anything has a head start in teaching, simply because the student will have added confidence in him, but he must go on from there, and what he tells the beginner are things he may no longer even think about when doing his stuff.

I keep thinking of how I tried to learn to shoot a shotgun at an age when many shooters are beginning to taper off. I talked to some of the world's best gunners to find that most of them had no idea of what they were doing when they broke clay targets or killed game. One of them said to forget the gun and look at the target. The rest, he said, would take care of itself, a matter of pure instinct. That was true in his flawless operation, but it sure wouldn't work for me. His instruction skipped the first few thousand shots.

The same thing goes for casting, lure manipulation, and the many other fishing skills.

And there was once when I took an inexperienced fellow fishing in a place where I thought he'd really be dazzled. This was many years ago, and I knew where there were some 75-pound tarpon ready for anything that moved or bubbled. This, I thought, would make him a fisherman for life.

So I helped him get organized. He couldn't cast very well, but he didn't have to. The plug went out, and a big tarpon glommed it as if he'd been waiting all day. He went up higher than our heads and broke the line. It happened a few more times and my guest sat down to look sadly at what tackle he had left.

"I always wanted to catch a bass," he said.

The tarpon were so far beyond his experience he didn't even appreciate them. He wasn't as excited as I was, and as far as he was concerned he might as well have been fastening his line to pickup trucks.

I wasn't helping him learn to fish. I was just making him feel foolish. Well-meaning people have done the same thing to me.

MAPS, CHARTS, AND HANDBOOKS for fishermen aren't used as much as they should be. I'm continually running into frustrated souls who have spent a bundle on equipment and travel but aren't quite sure where they are and haven't bothered to learn the location of fishing spots. Often such dope is available for the asking and a little snooping nearly always locates it at nominal cost.

The latest biggie on Florida salt water fishing

locations is **FLORIDA'S CHARTED SALTWATER FISHIN' HOLES**, available from Bureau of Maps, Drawer No. 5317, Tallahassee, Florida 32301. It covers the depth of the water, species of fish, seasons, and baits and lures. You can get it for three bucks.

An example of a more localized book is **FISHING MATE**, by Capt. Andy McLean, covering Everglades National Park. It contains well-marked charts of that rather damp country, and is available for \$1.50 from Capt. Andy McLean, 5158 N.W. 32nd Ave., Miami, Fla. 33142. It's in its 15th year. I've mentioned it several times before.

Any fishing handbook or directory is likely to be worth more than it costs. I defy you to read one thoroughly without learning something. I always get something from any handbook, even if I don't think it's any literary masterpiece.

Reading fishing literature profitably involves a state of mind. You pick up something new, read a little, and suddenly decide you know more than the author, so you chuck it. Nearly all fishermen are specialists to some extent, and it's easy to spot an area in which the author hasn't been around much. But stick with him and you'll generally find he has a specialty too—a specialty in which he's way ahead of you. Your purpose isn't to gratify your own ego (or at least it shouldn't be). It doesn't hurt to know what he knows too, however little.

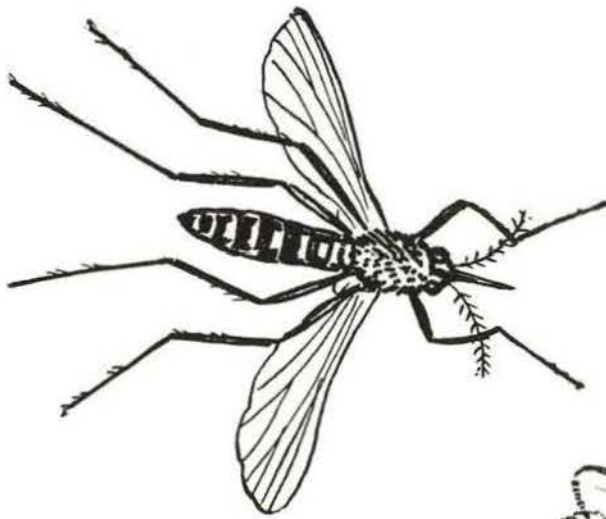
FAST RETRIEVES ARE NECESSARY with many kinds of lures. In recent years, many spinning reels have been built with faster takeups. The rule of "always fishing slower than you think you should" just isn't true, despite the fact that most of us retrieve too fast most of the time.

With certain lures, especially some of the vibrating types and the spinner baits, good bass fishermen sometimes crank their level-wind reels as fast as they can, and some guys can get more speed than others. If a bass wants a fast lure and is feeling good, you can't move it fast enough to take it away from him. There's also the matter of covering more water in less time.

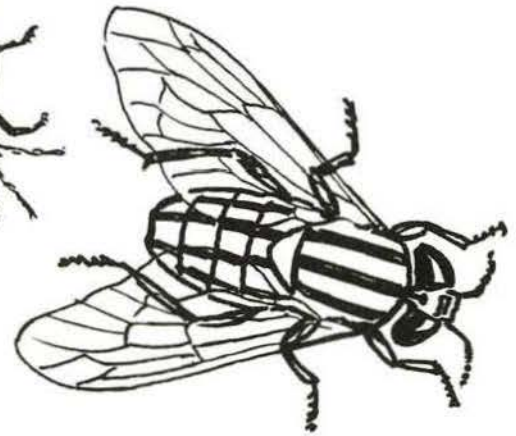
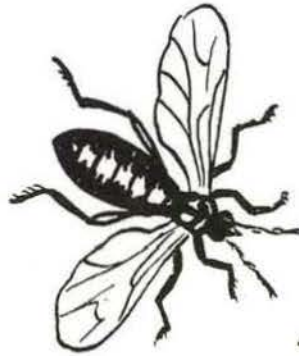
Of late, there have been some plugging reels built with a 5 to 1 takeup instead of the traditional 4 to 1. The slower ratio is termed "quad-multiplying."

Of course, you have less leverage with the faster reel; it simply turns harder, and some don't care for it. Others feel it's a big help and are willing to pay for it. For example, users of Ambassador free-spooling casting reels can buy "Buzz Gears" from the Cordell Tackle Company, P.O. Box 2020, Hot Springs, Arkansas 71901, and the gears also fit the Daiwa Millionaire.

To say the fast retrieve is better or worse than the standard speed would be silly. It's a matter of which you like. Try a fast reel if you get a chance. My experience with fast ones is very limited. ●



MOSQUITO



BITING FLIES



Drawings By Wallace Hughes

don't get bugged

OF ALL MISADVENTURES which can turn a pleasant outing into a nightmare, none can be so frustratingly unpleasant as encountering a batch of biting or stinging insects for which you are not prepared. The problem was brought into sharpest focus for me nearly 30 years ago on a rocky beach just below St. Augustine.

I was doing magazine photography, and my beautiful wife and two other delectable models and I were going to combine business with some surf fishing. We had hardly begun when all at once the wind changed, and the girls, in quite scanty attire, became eaten alive by hordes of nearly invisible sandflies. Even I (a much less tasty morsel) was turned into a fiery torch. The stinging nearly drove me insane during the few moments required to abandon my work. In those few minutes I vowed to discover something that would simply and quickly ward off such vicious attacks. Perhaps my research will be of value to you.

The pests which harass anglers, hunters, and campers either bite, sting, or get into one's facial passages. Of the biting ones, mosquitoes, sandflies, dogflies, yellowflies, ticks, and spiders are most prevalent. Stinging critters include yellow jackets, wasps, hornets, honeybees, and ants. Those which get into the eyes, nose, and ears include gnats and flies. Defense involves two factors: repellents and treatment.

You may be surprised to learn that insects don't react alike to repellents, and that the irritant

fluids secreted by them vary widely in composition. Insect bites and stings attack one with highly complex proteins, chemicals, and enzymes aimed at making your blood flow more freely and preventing its coagulation, or just plain causing you great punitive misery.

Of the various repellents now on the market, that I have studied personally, two are the most effective against the greatest variety of insects. These are *Off*, a product of Johnson Wax, Racine, Wisconsin, and *Cutter*, from Cutter Laboratories, Berkeley, California.

Off is excellent against mosquitoes and redbugs, and effective against most insects except sandflies and dogflies.

Cutter is excellent against sandflies, and about the best you can find against ticks, dogflies, and yellowflies.

In my experience, 6-12 is the best against gnats but poor against other itchybugs.

Chief ingredients in *Off* are N, N-diethyl-metaltolamide (14.25%); in *Cutter*, the same chief ingredient but 30.25% of it, plus 1.5% of Dimethyl phthalate and 1.25% of Butyl mesityl oxide. An interesting note for Floridians is that among the inert ingredients in *Cutter* is a fine sun screen, 5.1% of Homo menthyl salicylate.

An interesting new development is the sealed towelette, G66, by Jet-Aer, of Paterson, N.J., containing the same N-N Diethyl-metaltolamide plus other isomers, N-Octyl bicycloheptane dicarboxi-

mide, tetrahydrofurfural and other complicated active ingredients intended to taste and smell simply horrible to every insect. It is the most convenient of all packaging to use on arms, legs, and facial areas.

If you want a proving ground for the various repellents, go to one of the coastal islands around August, where all at one time you will very likely find mosquitoes, sandflies, dogflies, ticks, and redbugs. I know from my experiences on Blackbeard Island, off the Georgia coast, and St. Vincent, off Florida, that the body chemistry of people differs, so that a repellent which works well for one person may operate differently on others.

There are still, of course, the ancient repellents of oil of citronella, smoke from fatwood fires, and sulphur, all of which work to a point but all of which have objectionable features.

One of the main failures of outdoorsmen (Ooops! Apologies to Women's Lib: outdoorspersons) is not to put repellent in all the important places. In addition to exposed areas, it should go around the legs at top of boots or shoes, around the waist and neck, along the front of trousers and sleeves, and certainly on the buttocks if one plans to sit on logs or grass. The more one is to move through brush, the greater the area which should be covered with repellent.

A problem with many repellents is that they are transferred from the hands to gunstocks and fishing rods where they ruin the finish. In my 4WD Scout and boat I keep a pair of cheap rubber gloves. I put the repellent on the palms of the gloves and rub over my body. Then I take off the gloves and my hands are free of gook.

Other defenses are nets and a snoozing cloth or hammock. The conventional camouflaged net parka does a good job against all except redbugs and sandflies. A common item, but one seldom thought

of, is a bee veil. The veil has net all around, and, in addition, the area right in front of one's face is of extremely thin material so one can see even very fine rifle sights through it.

If I am to be in the woods or ashore all day, or camping overnight, I take either a space blanket or net hammock on which to rest during the noon break or between game feeding periods. Unfold the blanket on the ground and sprinkle a little commercial garden insecticide around the edge so neither redbug, tick nor spider will assail you. It is even better if there are trees from which to suspend a hammock. Net or jungle hammocks cost little, and the net ones can be wadded up and stuck in a pocket.

Remember too that a number of things *attract* insects. Many deer lures now on the market draw mosquitoes. Many lotions used by women draw flies as well as wolves. Sweaty and unwashed body odors call in the bugs. A can of angleworms draws yellowflies like mad, as a crew of us discovered while fishing the Oklawaha River. I noticed no one in the boat, except me, was getting bitten, and they were taking my ankles apart. When Bill Hodges moved the bait bucket over by him, the yellowflies attacked only Bill.

Okay, so I goofed and got myself bugbit while hunting wild hogs this past season. I didn't do what I knew to do. So . . .

First, the ticks. Ticks attack in both the six-legged larval stage and in the adult eight-legged stage. The larval, or "seed," tick is so tiny as to be almost invisible, and when he gets on you it is often by the hundreds or thousands because you have disturbed a tick nest, or "tick bush," as it is called.

On a hog hunt 5 years ago, I got approximately 400 such ticks. I listened to some "hogwash" about
(Continued on next page)

being prepared to deal with
the wildwood biters can
spell the difference between
a pleasant excursion and
something a whole lot less

By GERALD R. HUNTER



SPIDER

(Continued from preceding page)

how to treat the problem, and ended up delirious with fever under the care of two doctors, one of them Dr. Frank Osborne, of Tallahassee, a dermatologist.

If you get larval ticks, strip off and douse yourself liberally with pine oil, the ordinary kind one uses as a bathroom disinfectant. Leave it on 15 minutes, then take a hot soapy bath. Pine oil does not burn the skin even in hairy areas (but buy some *now* and rub it in a hairy place to be sure you have the right kind and that your skin isn't allergic to it). Failing this, you can swab yourself with kerosene, but you'd better not leave kerosene in hairy areas for more than a minute or it will scald all the skin off. (These products also kill redbugs.)

You'll not likely get larval ticks except in summer and early fall.

For the larger ticks, first rub the tick very firmly with your thumb. If it doesn't turn loose, don't scratch it off or pull it off or it will leave the head and make a spot that will be sore for weeks or years.

Forget that old "lighted cigarette" routine you've read too many times already. Holding a lighted cigarette to the tick is both ridiculous and prohibitive, as you'll learn if you try it. The cigarette cooks your skin long before the tick even gets the idea of what you're up to. By far the best tick knocker I've found (it also kills redbugs) is to borrow your wife's oily nail polish remover.

Wet a little pad of cotton in the remover, and hold it on the tick for about a minute. Then begin rubbing the tick with a circular motion, keeping the pad wet. The tick usually will come off within another minute. If he doesn't come off, you may

as well give up before you rub the skin raw. So go ahead and twist (not pull) him loose. Very seldom will the head remain in your skin, in his weakened condition, since nail polish removers contain ethyl acetate, isopropyl alcohol, and lanolin.

Youngs Drug Products Corporation, Piscataway, N.J., also puts out a tiny sealed nail polish remover towelette which is fine for travel.

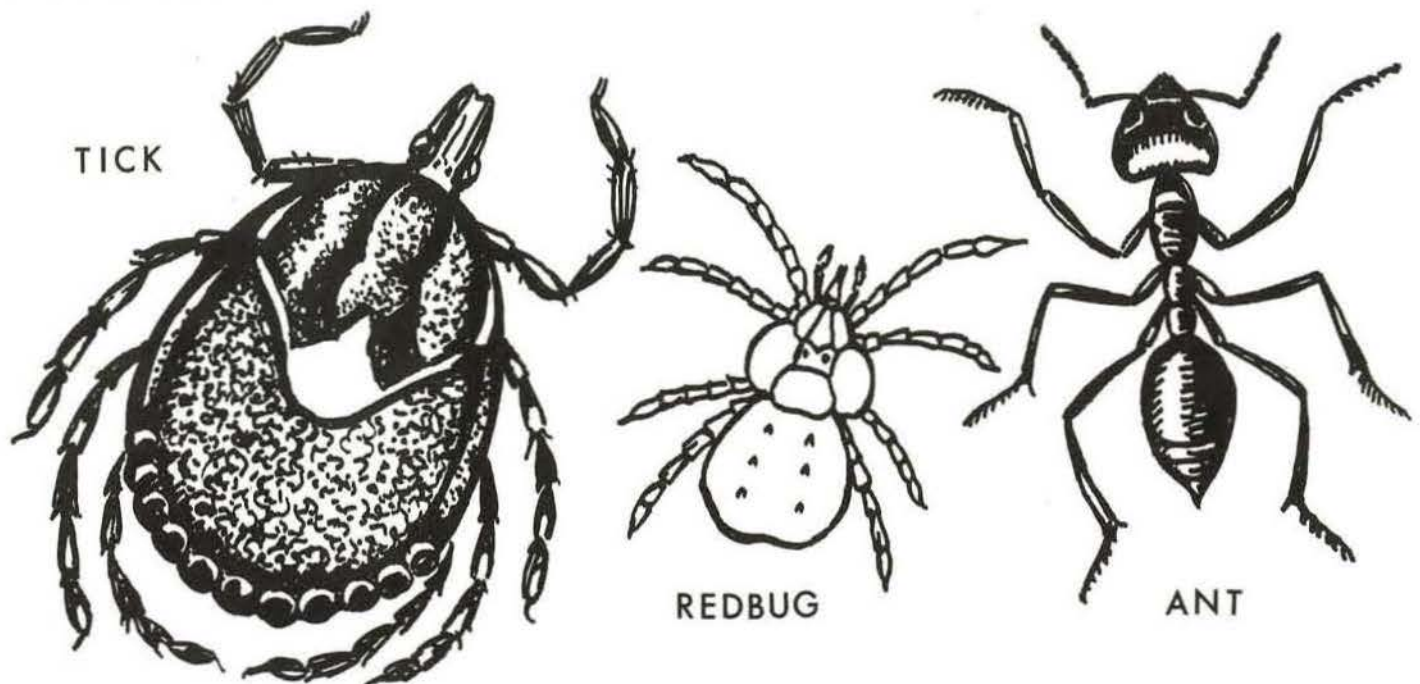
If the tick's head remains in your skin, put some antiseptic on the point of your knife, or sterilize it with a match, and go ahead and dig the head out. It won't hurt nearly as bad, or as long, as leaving it in.

Redbug infestation can be greatly reduced if you shower with very hot water and strong soap as soon after exposure as possible. Then, if you have very good eyes, or a wife who doesn't think it too amusing, you can remove redbugs with the point of a sharp knife. But redbugs normally are invisibly straw colored. By the time they become visibly red, it's *your* blood you're admiring, and their itchy juices are already instilled in your skin.

The best thing I've found for attached redbugs is *Chigaid* (C & C Laboratories, Dallas, Texas), which both kills the rascals and eases the itch. Ingredients are collodion, camphor, phenol and oil eucalyptus. The stuff reduces the itch from any kind of bite.

For bites of relatively low volume like mosquitoes, flies, and redbugs, the darndest thing you ever heard of has just come on the market: the *Styme*, from Human Circle, Inc., 1382 Argonne Road, South Euclid, Ohio 44121. It's a purely mechanical device, developed by Physicist Carmen Piunno, which, when simply pressed on the bite, creates high, unbalanced pressures and redistributes the insect saliva. In effect, it so highly dilutes the

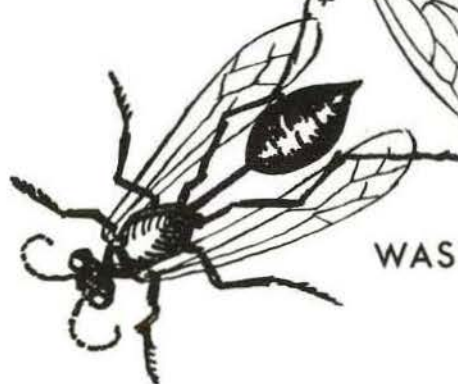
Drawings By Wallace Hughes



HORNET



WASP



HONEY BEE



BUMBLEBEE



poison that no tissue cell is affected to an uncomfortable degree. The *Styme* lasts forever, costs only \$2, and certainly works. It is not effective on stings of great volume, like those of yellow jackets.

Suppose it just wasn't your day, and despite all precautions and remedies, some sort of itch is still there.

A nonprescription cream which contains both antiseptic, for places you've scratched raw, and a drug, to desensitize itch, is a Rexall product called *Eudicaine*. Intended for hemorrhoids, its Phenylmercuric acetate, benzocaine, titanium dioxide, balsa Peru, and menthol do a reasonably good job of stopping itch.

A prescription drug available only from veterinarians is *Panalogs*, a Squibb product. Doctors can't legally approve your using it, but all vets I know use it on themselves, and I haven't seen a dead one yet. It contains Nystatin, neomycin sulfate, thiostrepton, and triamcinolone acetonide, and really knocks the itch. I found out about it after watching it work wonders on my dogs. There was an even better product which has been removed from the market because it contained sulfanilimide. Any product effective in treating hotspots on canines will reduce itch. The active agent is the benzocaine or other similar narcotic.

Calamine lotion is of some help to some people.

Styme is a new idea in bug bite treatment. Creating an unbalanced pressure in the immediate area of the bite, it dilutes the poison and redistributes saliva throughout much larger volume of tissue—so that no tissue cell is affected to uncomfortable degree.

From my research I could write a library about itchybugs, but space limits this treatise to those of little danger. However, there is one very real hazard I'd like to mention: the hypersensitivity some individuals have to the stings of *Hymenoptera*, the bees and wasps and their allies.

A study made by Dr. Harold D. Newson, of 460 deaths from poisonous stings and bites during a 9-year period, found that half the deaths—229—were from common insect stings. Only 138 persons died from snakes. The other 93 were from miscellaneous bites. So if you have reason to believe you are allergic to any sort of stings, go tell your doctor and he'll prescribe medication or perhaps a carry-along kit containing an injection which can save your life so you can keep scratching redbugs like the rest of us! ●





PEREGRINE FALCON, Adult

Photo By Mike Fogarty

TWENTY YOUNG PEREGRINE FALCONS hatched and reared at Cornell University's Ornithological Laboratory in 1973 prove that this endangered bird of prey can be propagated in sufficient numbers to permit restocking of its former haunts on a large scale, according to Professor Tom J. Cade, director of the unprecedented program.

In 1970, the Laboratory of Ornithology and the Division of Biological Sciences at Cornell undertook a research program to learn how to propagate peregrine falcons and other birds of prey in captivity.

The Laboratory established "The Peregrine Fund" as a way for members and friends to help support this work, while the Division allocated more than \$100,000 for the construction of a large research facility.

The goal is to eventually provide a continuing supply of birds for scientific studies and the restocking of peregrines in natural areas from which they have disappeared.

Research indicates that the American peregrine falcon is declining mainly as a result of pesticide ingestion.

The U.S. Bureau of Sport Fisheries and Wildlife reported that in 1970 there were less than 65 known active nesting sites for the peregrine falcon in western Mexico, the lower 48 states of the U.S.,

Rearing the Peregrine Falcon In Captivity

From the PEREGRINE FUND Newsletter

and southern Canada. A few hundred pairs still breed in interior Alaska and northwestern Canada.

In 1972, significant results were achieved with artificial insemination, including its use with golden eagles and several other captive-produced birds of prey, most notably four Lanner falcons. By removing the first set of eggs, captive females could be induced to recycle and lay second clutches.

By April of 1973, 30 red-shouldered hawk eggs, obtained by special permit from the State of Florida, had been incubated, along with 10 Lanner falcon eggs and more than 40 American kestrel eggs produced by captive birds that had been stimulated by an artificial photoperiod. A reasonably successful technique had been worked out for

the artificial incubation of falcon eggs, and virtually foolproof methods for rearing the hatchlings.

Then four pairs of peregrines began mating and laying eggs. These successfully reproducing falcons are all *eyasses*—birds taken as nestlings—and from comparison with the negative performance of trapped adult pairs, only eyasses or captive-reared falcons breed easily in confinement. Falcons usually do not attain reproductive capability until they are nearly 3 years old.

"The rearing of 20 young peregrines from just three fertile pairs in one season is a record-breaking and significant achievement, because it proves the practicality of mass production," says Cade. "With 30 such pairs, 200 or more young peregrines a year can be produced for restocking programs and other purposes. Two hundred young represent more than the natural annual production of the entire population of peregrines that used to nest east of the Mississippi before the era of DDT."

Cade and his associates, all falconers by avocation, are thinking about a serious restocking program as early as 1976, but they point out many unknown factors to be taken into consideration. For example: (1) how to establish inexperienced, captive-raised birds in the field; and (2) how to induce released falcons to accept and occupy new or abandoned aeries for nesting. Merely releasing captive birds to the wild would probably result

in the loss of hard-won birds. They will require conditioning and gradual release.

"Perhaps the best way to economize on the use of captive-raised falcons for restocking will be to establish pairs of trained birds in particular areas before allowing them to go wild," says Professor Cade. If they are regularly flown and exercised by falconers in a given area with a suitable nesting structure, the pair should develop strong territorial attachments to the area and to the potential nesting site, and should remain there to breed once they are allowed to go free. Their progeny, of course, would go directly into the wild."

In the next 10 years, 2,000 falcons could conceivably be returned to nature by project personnel and cooperators. If just 400 of them became established as breeders, they would have essentially been restored to pre-DDT levels of abundance in eastern North America. By 1980, perhaps there will be free-flying and breeding peregrines in all their old haunts, and in some highly original places as well. ●

Photos By Cornell University
Laboratory of Ornithology

In lower right photo, a baby peregrine is seen emerging from the shell after 32 days of incubation. Female gyrfalcon, at right, is shown in her role as foster parent, feeding the babies. Below, three and four day old peregrines are fed by hand while the mother lays more eggs.



focal points for a lot
of Florida outdoor
activities are these

Central Florida Swimming Holes



DOTTED THROUGHOUT CENTRAL FLORIDA in this land of lakes and hills are many inviting fresh water springs. Most of them have public access and accommodations for swimmers. With over 2,000 lakes in this area, many folks find swimming waters available at their front door. In the winter, when lake waters cool off into the 50s, and in the summer, when the surface water temperatures rise into the 80s, most people do their swimming in one of the nine springs in this area. The water temperature in the springs varies from 69 to 72 degrees, winter and summer. When a warm day occurs during the winter season, these waters are more comfortable than trying to swim in one of

the large lakes. The reverse occurs in the summer when one wants to refresh himself by taking a nice, cool plunge.

These springs are the summer vacation spots for people living year-round in central Florida. Most of them are only a few minutes' ride from home and offer the family safe swimming, beautiful surroundings, and fine picnic facilities. Some springs have been highly commercialized, and others are practically in their natural state.

Probably the most famous of these springs is just off the Oklawaha River, 6 miles east of Ocala. This is Florida's famous Silver Springs. At these springs one can swim, take a jungle cruise, ride the glass

bottom boats, or take pictures from the submarine boat. Connected with these springs are a deer ranch and Ross Allen's Reptile Institute. These springs are a major tourist attraction.

Just 25 miles east of Silver Springs is Juniper Spring. This has been called the most beautiful spring in the State of Florida. It was developed, and is still maintained, by the U. S. Forest Service. It is very rustic and natural, with the water in the spring remaining at 69 degrees. There are picnic facilities and shelters capable of taking care of large group picnics, and a bathhouse and very fine trailer park. The entrance to Juniper Spring is located on Florida State Road 40, between Silver Springs and Astor.

East of Juniper Spring is Silver Glen Springs. These springs are a favorite summer resort for all of Florida. There are cabins available, and it is only a short boat trip from the springs to Lake George and the St. Johns River. Swimming here is excellent, with the water temperature a constant 72 degrees. These springs remain a favorite for those who wish to try their luck at crabbing.

North of Silver Glen Springs, also flowing into Lake George, is Salt Springs. These springs are famous for the fine quality of blue crabs caught between the springs and Lake George. Here you will find a recreation building and picnic tables available. Salt Springs is located at the termination of SR 314, which runs northward from a junction with SR 40, about 2 miles east of Silver Springs.

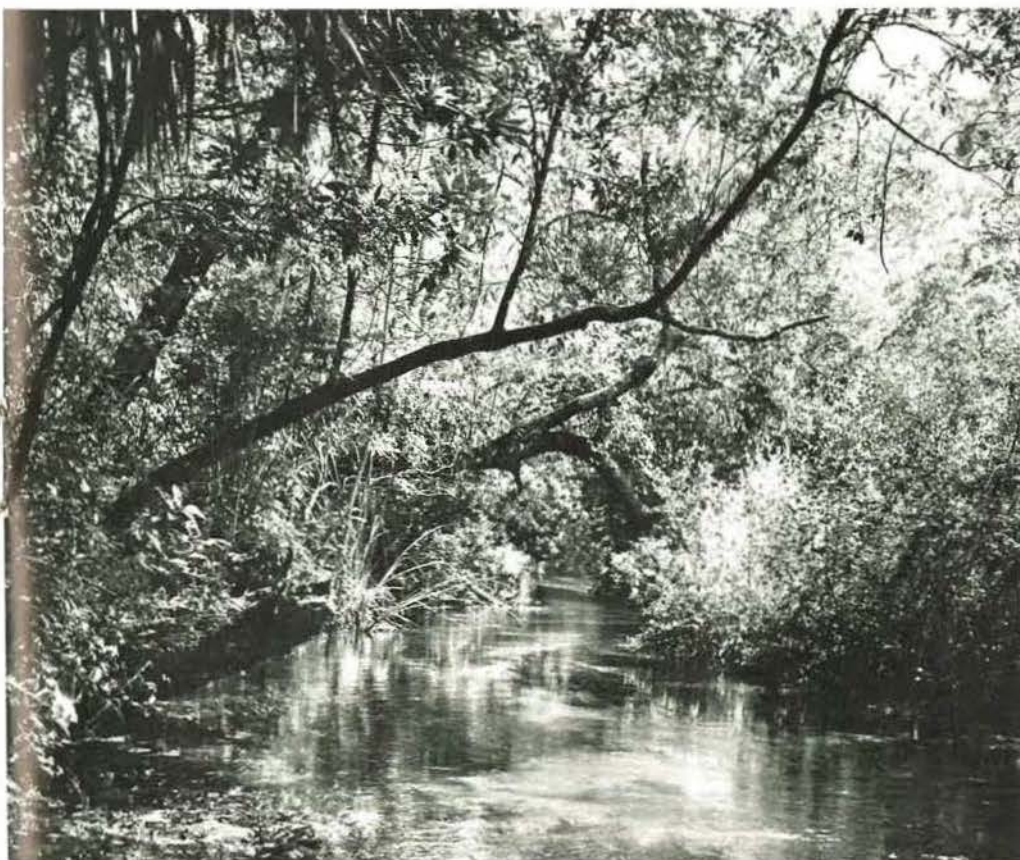
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Photos By Florida News Bureau, Dept. of Commerce

By T. N. ANDERSON

The main spring at Florida's Silver Springs, extreme left, flows in excess of 650 million gallons of glass clear water a day. Favorite of blue crab anglers is Salt Springs, above. Juniper Spring run, left, with clear waters, pristine surroundings, is a canoeist's haven.



(Continued from preceding page)

Alexander Springs is another favorite attraction in this area. At these springs is a trailer park, a boat livery, a bath house, and picnic facilities. Recently it has been made a game refuge, and the area abounds with all types of wildlife. The water temperature remains a constant 72 degrees year-round. It is a very picturesque place to have a family picnic.

There are many other springs located in this sector. A few are not developed, and some lie on private property. Visitors are amazed at the thousands of gallons of water that flow, per minute, from the springs, keeping our rivers and streams supplied with fresh water. Springs which are developed in a small degree or have not been developed are Seminole, located east of Eustis on private property; Bugg Springs, on private property due west of Okahumpka; and Blue Springs, bubbling on the shores of Lake Harris. A camp situated at Blue Springs is enjoyed by many swimmers who take advantage of these fine springs.

Moving to the eastern boundary of this section, we find DeLeon Springs, just north of DeLand on U. S. Highway 17. These fine springs have been developed into a tourist attraction and have a unique Pancake House Restaurant plus a bathhouse and many interesting exhibits available for the visiting public.

Nearby, in Orange City, south of DeLand, is another Blue Springs. There are picnic and bathing facilities here, and it is a favorite launching place for fishermen on the St. Johns River.

Still another famous spring is Sanlando, located west of Longwood, Florida, off U. S. 17-92. This attraction boasts a beautiful white sand beach and an outdoor swimming pool in addition to the natural springs. There is a restaurant, a gift shop, an outdoor dance floor, and a picnicking area on the grounds. Sanlando has long been famous for its beautiful flowering shrubs and tropical plants.

Wekiwa Springs, just northeast of Apopka, is practically the last of the untapped recreational areas in central Florida, recently opening to the public as a state park. The water in the springs varies from 72 to 75 degrees year-round, and there are facilities for swimming, picnicking, and fishing. The spring has a main pavilion with a bathhouse and restroom facilities. Within the park's woodlands stand sweetgum, oak, pine, maple, and cypress trees. Among wildlife are deer, raccoons, quail, squirrels, and rabbits.

All the waters open to the public are periodically tested for purity. There is a high mineral content in most cases, but all of the springs are healthy and enjoyable.

You are invited to visit and take a dip in our world famous central Florida swimming holes. ●

Photo By Dept. of Natural Resources



Photo By Wallace Hughes

Swimming is a major attraction at Wekiwa Springs near Apopka. The area was opened recently as a state park. The area which surrounds the springs supports a variety of wildlife, including the gray, or cat, squirrel, like the perky specimen above.

The Bluegill

By J. E. HEIDENREICH

THE BLUEGILL, colorful little combatant, is one of the most highly prized of Florida's panfish. It is basically dark olive-greenish in hue, with purple shadings on the back, reddish on breast and belly, and darkish vertical bars on the sides. The black-edged "ears" (actually an elongation of the gill cover) and the black markings on the back part of the dorsal fin are bluegill trademarks.

The color varies somewhat with water and bottom conditions. Dark, tannic acid-stained waters, for example, tend to produce darker fish. In clearer water the bluegill's coloring is usually lighter. Despite local color variations, however, the dark dorsal fin spot and the black-marked "ear" flap remain reliable bluegill identification marks.

Highly favored as table fare, this oval-shaped panfish inhabits streams, ponds, and lakes throughout the state. Call him bream, bluegill, copperhead, sunfish, or whatever, the species is a special favorite of the cane pole set. Even the more sophisticated rod and reel fisherman in the know is likely to hold the mighty mite in high regard. It isn't all compounded of nostalgia either, despite the fact that many fond memories of youthful fishing jaunts are likely built around a string of bluegill bream. With gear matched to the size of the fish, the bluegill will hold his own in some pretty fast angling company, fighting ounce for ounce with the best of them.

A fond memory in the making—who could forget a catch like the one below? There are quite a few bragging size bluegills on that stringer!

Photo By Larry Martin

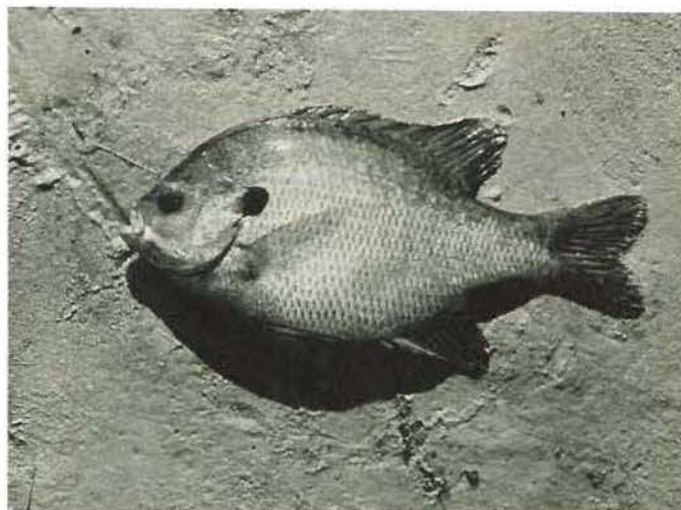


Photo By Wallace Hughes

More and more fly-casters are discovering their chosen gear works well on Florida's waters. The bluegill has played no small part in this revolution. A good scrapper when hooked, a "keeper" bluegill on a light rod is a worthy opponent. Many a line has been broken on bluegill when an overly-eager fisherman jerked his line too hard instead of driving the hook home with a firm but gentle flip or a steady pull.

The species has a tendency to move about in schools composed of individuals of about the same size. A catch of bluegills may be fairly uniform, with only a few ounces difference between the largest and smallest.

When bluegills are feeding top water, which they sometimes do around hyacinth beds, lily pads, and other aquatic growth, you can hear them "pop" similar to warmouth as they suck in appealing morsels.

In addition to being a good game and food fish, the bluegill is a primary forage species for largemouth bass. Overcrowding can be a problem in ponds and lakes where there are more bream than the bass can keep under control.

Bluegills may spawn during any month of the year in Florida, but it is during the warmer months that most of the spawning activity takes place. The eggs are deposited in cup-shaped depressions fanned out on the bottom. The male takes over after the eggs are in place, guarding them and the newly-hatched fry during their early days of life.

Surface lures productive of bluegills include small popping bugs, both wet and dry flies, and rubber-legged spiders. In underwater lures, color seems to be of more importance than is the case with floaters, but, as in every other phase of the rod and reel sport, you are likely to get an argument on the matter from most any Waltonian you meet.

There is one thing on which most of them will agree, however: the mighty mite takes a back seat to few other fish, in the water or on the dinner plate. ●

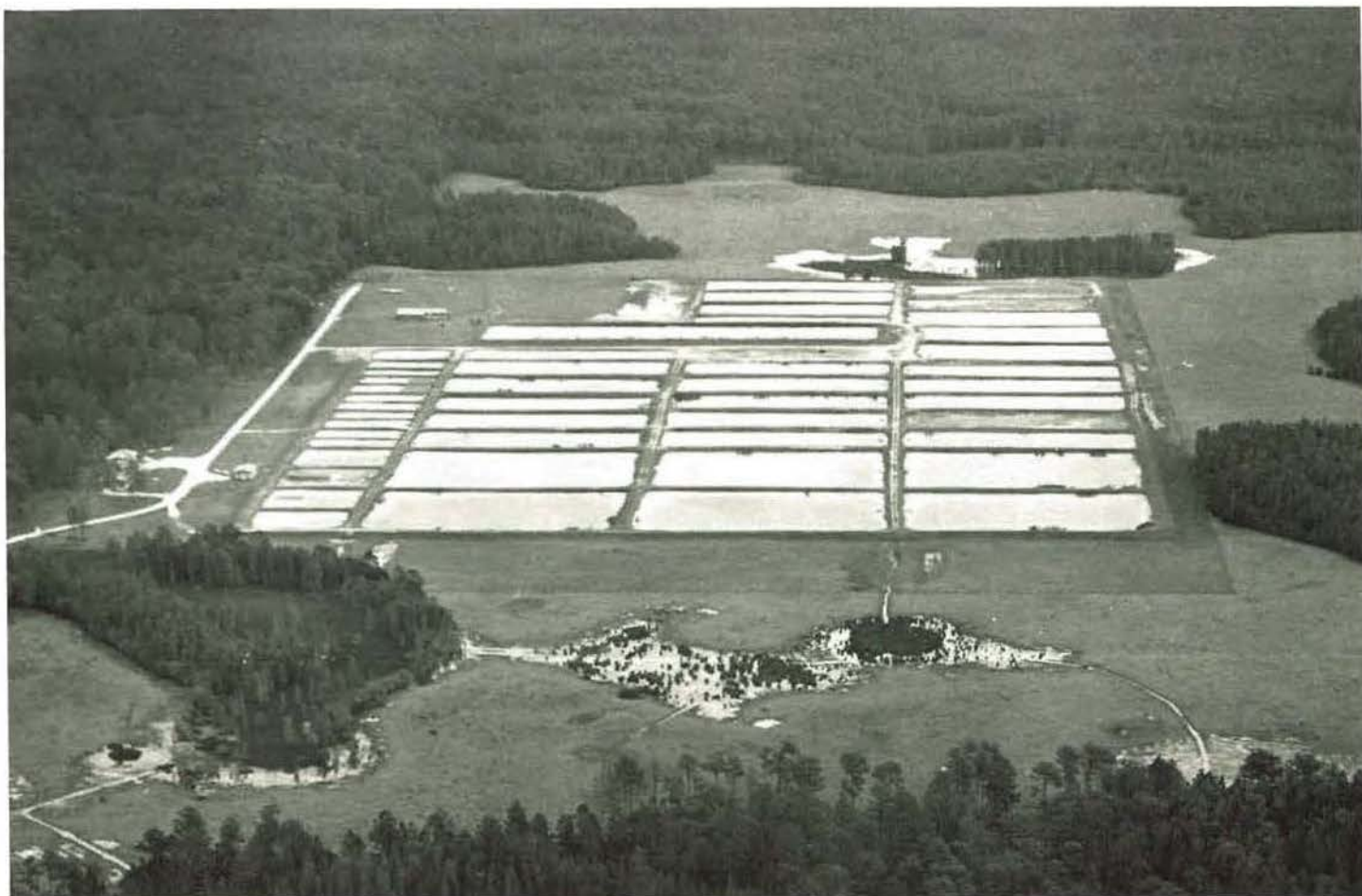


Photo By A. D. Aldrich

old Ma Nature herself runs the show with the Commission's hatchery men giving a helping hand

Factory in the Pines

SOMETIMES WHEN THE WIND is right, you can hear the big semis-roaring past out on Highway 471. But most of the time, the sun-drenched quiet is broken only by the rambunctious caterwauling of an egret incensed by a neighbor's poaching on his private hunting ground, or the lost-soul wailing of a limpkin, or the shrill screeing of a red-shouldered hawk on the hunt. Oh, now and again you'll hear the muted hum of the Massey-Ferguson hauling a disk over the bottom of a drained pond to discourage weeds from taking over and to expose accumulated wastes to the beneficial effects of sun and wind. But for a factory turning out a million or more units a year and touching the lives of untold thousands of Florida fishermen, it's a mighty quiet operation.

In the general sense of the word, of course, it's stretching a point to call Richloam Fish Hatchery a factory. But then, it turns out a product that is in great demand by resident and visitor alike. The crew serves up the raw materials—brood fish, water, food elements—and lends old Ma Nature a helping hand in turning out an annual crop of

fish. In hardly any time at all, these finsters are a sure-fire bet to become the object of the rapt attention of thousands upon thousands of hook dunkers throughout the state.

Once upon a time, not too far back for some established residents to remember, the Game and Fresh Water Fish Commission had quite a number of hatcheries scattered about the state. There was one at Winter Haven, one at Oviedo, and one at Wewahatchka, to recall a few. Bowing to practicality and economics, these smaller stations were phased out over the years in favor of the two present Commission-operated hatcheries. The smaller is near Holt, in the Blackwater River State Forest of west Florida. Although now getting some age on it, the Holt Hatchery has been modernized periodically, so it remains an important hatchery production facility, turning out a substantial crop of game fish which are released mainly in the waters of the northwest region.

Richloam Hatchery is located in Sumter County, some 30 miles north of Lakeland in the Withlacoochee State Forest. Initial construction was

completed in 1966. Its 47 ponds spread over a good-sized patch of high ground in the Green Swamp area. Richloam is one of the larger warm water hatcheries you are likely to run across.

The hatcheryman's year starts early in January, not just because the calendar says so, but because that is when the largemouth bass brooders are moved from winter quarters to the brood ponds. Here begins the annual cycle of fish production which is what a fish hatchery is all about.

Unlike the case with the trout and some other fishes reared at the more northerly hatcheries, largemouth bass are not spawned by hand. Rather, the mature fish are put into brood or spawning ponds at the rate of about 60 to 65 pairs to the acre, and nature takes over from there.

The rising water temperature of late winter

and early spring triggers the spawning urge. Generally speaking, when the pond temperature hits 63°F. and stays at that level for a few days, spawning activity starts. At Richloam, this means as early as late January. The peak of bass spawning here comes during the period from the middle of March to the third week of April.

The male takes on the major part of the nursery duties. He fans out a shallow, bowl-like depression on the pond bottom, fertilizes the eggs deposited by the female, guards the nest against the inroads of hungry intruders, and rides herd on the young fish until they are large enough to take care of themselves.

The largemouth is a voracious feeder, taking a variety of food items. The only requirement is

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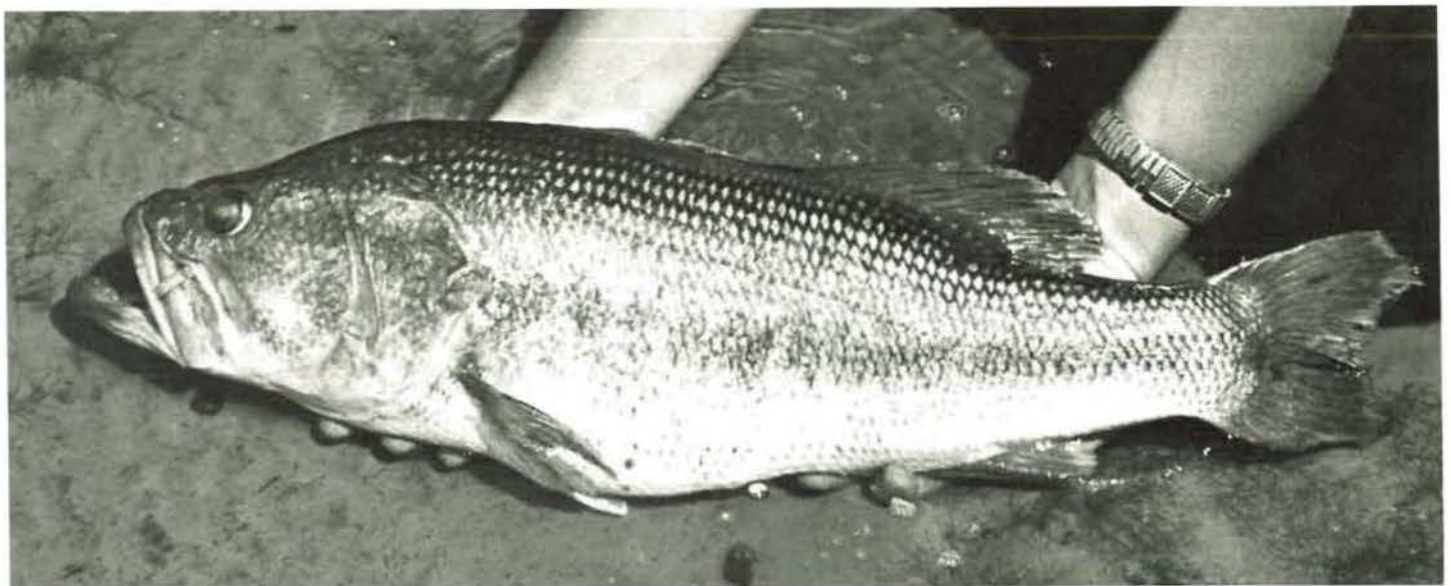


Photo By Wallace Hughes

Photo By A. D. Aldrich

By MORRIE NAGGIAR

This state's number one freshwater game fish, the largemouth bass, gets much attention at Richloam. Bass fry are removed from brood ponds at frequent intervals to minimize cannibalism. They're placed in rearing ponds, where, with abundant food, they grow quickly to the 1½- to 2-inch stocking size.



(Continued from preceding page)

that it be living food, and any fish smaller than itself is a likely candidate for the mill.

Even in experimental feeding tests, a majority of the bass forced to face a diet of "dead" food such as ground shad and pelleted feed, starve to death rather than change their ways. Some few do learn to feed on such unnatural rations, and become fat and sassy while their kin wither on the vine.

Starting at a tender age, bass show a strong tendency toward cannibalism, especially when there is a shortage of other species to feed on. Even the adult fish, once their paternal duties are over, may turn their attention to any passing fingerling, including members of their own brood, so recently and so diligently guarded.

Because of this fact of largemouth life, the young fish must be seined from the brood ponds within a few days after hatching. The fingerlings are carefully graded to size, for if there are any young fish even slightly larger than the others in the rearing ponds, it is bad news. The hatcheryman is likely to discover, in a surprisingly short time, a relatively few survivors of markedly different size from the others of their age class, and far fewer fish than hoped for surviving in the pond.

Collecting bass fry is accomplished by seining, which means getting right into the pond with the fish. Don't let anyone tell you that Florida waters aren't on the coolish side during the late winter-early spring period. A scuba diver's wet suit is not only a comfort, it's a near necessity when picking up some of those early-hatched fry.

Time was when the crew was forced to hold off fry gathering until the weather was calm so the schools could be seen beneath the surface. Then it was discovered that snorkeling gear makes weather a minor consideration. Equipped with a diver's mask and snorkel, the hatcheryman, from his vantage point under the surface, can readily spot the schooled fry in most any kind of weather. The young fish are picked up in a fine-mesh net, graded, and moved to the rearing ponds.

As already mentioned, bass, even the very young ones, are not much for "dead" food. The answer to feeding a large population of the voracious youngsters is cooperation with nature. Not at all involved, it is simply a matter of introducing

Photo By Art Runnels



Photo By Morrie Naggior





Photos By Morrie Naggior

Bass fingerlings are ready for distribution, upper left. Fish are hauled in tank trucks equipped with aerators to assure abundant supply of oxygen. Below left, Commission and Department of Natural Resources biologists seine the white amur from experimental pond at Richloam. Bluegill, shellcrackers, above—produced in quantity at hatchery.

good quality hay into the rearing ponds. This encourages a quick population explosion of the pond's zooplankton, the tiny microscopic and near-microscopic animals that form a vital link in the natural food chain. The technique is simply a

large-scale application of the common biology lab principle of inducing the growth of myriads of small organisms, or infusoria, by putting a handful of dried grass in a container of water. The basic difference is quantity—the handful of grass becomes several bales of hay, and the container of water is measured by the acre.

As the young fish grow, their food demand gradually outstrips the ability of the pond to produce sufficient organisms to maintain them. Introduction of small forage fish such as *Gambusia*, the mosquito fish or potgut, is one answer, but it would require a good number of ponds to raise enough forage fish to keep the bass going for very long. The expense could rapidly outstrip the value of larger fish for stocking. Obviously this is no solution.

At this time the young bass average between 1½ and 2 inches in length. Studies have shown survival of fingerlings of this size to be excellent, and given reasonably fertile water, growth will be rapid. The fish could be expected to be in the 1 pound plus class within a year or less, given good foraging conditions. This, then, is the most suitable time to move the fingerlings to the stocking site. It also explains why bass fingerlings for stocking Florida's waters are available only in the spring.

Bluegills and shellcrackers (redeer) are also produced in considerable quantity at Richloam. Although other stocking combinations have been tried, under most situations encountered in the usual pond or small lake situation in Florida, none provide as good fishing or as many total pounds of fish as the bass-bluegill combination.

As with largemouth bass, production of bluegill and redear is accomplished by allowing the fish to spawn naturally in the hatchery ponds. The brood fish are stocked at a heavier rate than is the case with bass, usually about 100 pairs per surface acre. Encouragement of a heavy zooplankton bloom is accomplished by putting hay in the ponds at the rate of about 400-600 pounds per acre, the same rate as for bass rearing ponds.

Bream are more adaptable in their feeding habits than bass. They take a variety of living organisms, both plant and animal. They also readily accept such artificial food as pelletized hatchery ration and cottonseed meal. Young bream are not subject to heavy predation by others of their kind as is the case with largemouth bass. This makes it practical to leave them in the brood pond with the adults until collected for distribution in the fall. At that time the young of the year average from 1½ to 2½ inches in total length.

Although channel catfish were formerly produced at Richloam, the catch of stocked cats by sport fishermen was relatively small in most cases, and the cost of production quite high. These fac-

(Continued on next page)



In a cooperative project with the Department of Natural Resources, the Commission is investigating the possibility of using the white amur or grass carp, at left, to control certain troublesome aquatic weeds. Some amur reached 4 pounds in weight during first year in weed-rich ponds. Below, striped bass being stripped of eggs. Artificial propagation of stripers is difficult, but it promises to result in thriving new sport fishery for Sunshine State.

Photos By Morrie Naggier

(Continued from preceding page)

tors, coupled with the limited demand, made it uneconomical to continue the rearing of this species in the hatchery program.

Limited stocking of channel cats is still conducted where special situations indicate a good possibility of providing worthwhile returns to the sport fishermen, or to fill special requirements in manipulating fish populations to improve sport fishing. The fish required for these limited applications are obtained from other sources.

Considerable quantities of striped bass are reared at the hatchery from brood stock captured from native runs in the extreme northern part of the state. Only selected lakes have thus far been stocked with stripers. Results appear encouraging, but the evaluation of the species is continuing. In addition to providing good sport fishing, stripers show promise of being an excellent control on gizzard shad, a "trash" species which frequently reaches superabundance in some Florida waters.

The white amur, or grass carp, is also being reared at Richloam on a limited basis for stocking a number of closely guarded experimental ponds. It appears that the species may have use as a control for certain types of troublesome aquatic plants, but further investigation of their weed-eating habits and other facets of their life history need investigation before they are considered for general stocking.

To assure the orderly distribution of fish from state hatcheries, a system of priorities has been established. This assigns top rating to fish management areas and other waters to which the public has full access. This includes emergency, non-scheduled stocking of public waters where unforeseen circumstances such as industrial accidents have brought on a substantial fish kill.

Second priority is assigned to research projects which, in the opinion of the administration, serve a useful and needed function in properly managing the resource. In order to give a margin of safety, a number of fish beyond the expected requirements for stocking public fishing waters and to



fulfill research needs, are reared at the hatcheries. In most seasons this results in a surplus of game fish that are available for other uses. It is the policy of the Commission to provide fish for stocking private waters from these surplus fish, after the priority projects have been taken care of.

This, in general, is the Commission's hatchery program. Though simple in concept, complications of one kind or another are forever arising. A sudden unexpected drop in the oxygen content of pond water, a pipeline break, an invasion of predacious insects in a fry pond, or the failure of the expected zooplankton population to develop—untold hazards ruffle the smooth sailing of the fish production program. I guess you could say it's a fact—the old truism that the hatcheryman's lot is to be forever teetering on the brink of disaster. ●

Gunsmith's Delight

HUNTING

although home gun tinkering used to require an array of special tools, today's home gunsmith can get by with relatively few



By EDMUND McLAURIN

FLORIDA'S LICENSED HUNTERS and fishermen have good reason to look forward to improved hunting and fishing, and less risk of injury when hunting.

Included in the 1974 fiscal year national jackpot of more than \$62 million being distributed to states by the Fish & Wildlife Service, of the Department of Interior, as Federal aid to state fish and wildlife restoration and hunting safety programs, is a total grant of \$1,222,037 for Florida.

Of the total amount, \$737,455 is a specially designated allotment for restoration of wildlife species depleted or threatened by housing and industrial expansion and other environmental factors. Permitted use under the allocation are expenditures for various state-sanctioned and managed wildlife projects—including acquisition of land needed for development and manipulation of game habitat, as well as associated biological research.

In essence, this means that public hunting areas and other natural game habitat areas in need of wildlife population improvement can be given more attention than was possible in the past.

Conceivably, these activations might include an improved management program for deer in Ocala National Forest and in the Citrus Game Management Area. The two public hunting areas have experienced acknowledged deer population decline but are showing improvement. Both areas once had larger deer populations.

Origin of the public funds for such specific use by states, including use in Florida, is the 11% Federal excise tax that is included in prices sportsmen pay for sporting arms and ammunition, and 10% Federal excise tax imposed on pistols and revolvers.

States get allocations from total annual tax revenue on the basis of number of hunting licenses issued annually by the state, as well as the land area of each state. Large states selling more hunting licenses than Florida, of course, share more substantially than Florida. However, judging by the latest fiscal year grant of \$737,455 given to Florida specifically for wildlife restoration, the state is faring well in shared funds accumulated annually from Federal excise taxes sportsmen pay for their firearms and ammunition.

For the enhancement of hunting safety and the construction, operation, and maintenance of public

target ranges, Florida has been given a grant of \$124,980 from the 1974 fiscal year Federal aid budget.

While hunter safety education in Florida must continue to depend on volunteer workers—particularly National Rifle Association-certified instructors of Camp Perry experience and accredited N.R.A. teaching course background—the availability of the Federal funds will permit state publication and distribution of a greater volume of educational material than formerly.

Just how much of the \$124,980 will be spent on construction and maintenance of public shooting ranges (sorely needed in some Florida counties) remains to be seen.

For fish restoration, Florida's grant from the 1974 fiscal year conservation jackpot of the U.S. Fish & Wildlife Service is \$359,602.

The availability of the money means that the Florida Game & Fresh Water Fish Commission can at least give early attention to the more urgent fish management problems it faces. Also, rehabilitation of more polluted, sometimes almost stagnant, lakes can be undertaken as scheduled projects.

Money comprising the national fund shared among the states for fish restoration work comes from the 10% Federal excise tax imposed on certain items of fishing tackle. Distribution of accruing revenue is made according to a formula based on the number of fishing license holders in each state and the area of each state.

ANY SHOOTER who has trouble seeing metallic sights clearly, even with prescription glasses, should change to a scope sight, with its single sighting plane. A good scope will virtually make his eyes young again. When mounted on the rifle, the scope should be positioned for proper eye relief. It's right when you get a full field of view through the scope every time you put the rifle to your shoulder, without having to move your head forward or back to obtain full field of view.

Make repeated tests for correctly located scope position by putting the rifle to shoulder with eyes closed, then opening your eyes. If you don't *instantly* see the scope's full field of view, without any field size reduction or large black bordering

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ring, the scope is either too far forward or too far back in its holding rings. Also, if your aiming eye does not immediately find scope center for instant alignment of scope reticule, you may have to add a comb height pad of needed correction.

FIREARMS MANUFACTURERS generally discourage factory return of guns that need only minor repair work. They point out that, of necessity, they must pass along receiving and handling costs to the customer, besides the charges for parts and gunsmithing services. Total cost of factory servicing is apt to be many times that of the small parts, or tune-up work, needed.

On some of their discontinued models, the factories decline to do any work at all—simply because they no longer have production parts.

Fortunately, many small repair jobs, as well as a variety of accessory installations and action-smoothing jobs, can be done right at home by the gun owner himself.

Where home gunsmithing once required an array of special tools, today's home gunsmith can get by with relatively few.

Given a versatile, modern electric hand tool called the Dremel Moto-Tool, and kit of accessories, the home gunsmith needs only the specialties represented by a workshop vise, an assortment of gunsmith's screwdrivers, a micrometer, and a few quality general purpose files to accomplish minor repair work and accessory installations. Other tools, such as small hammers, drive punches, hacksaw, etc., are usually already household items.

The versatility of the little Dremel Moto-Tool is amazing! Such gunsmithing jobs as inletting work on gunstocks, drilling small holes in hard metal, deburring, grinding, smoothing rough actions, cleaning small recesses, fitting pistol grip cap, shaping handgun grips, metal sawing, and polishing are a whiz with a Dremel Moto-Tool.

If the home gunsmith happens to also like one of the many forms of creative hobby work, such as scale model making, jewelry design, internal carving of plastic blocks, delicately ornamented ceramics, metal engraving, wood carving, or sculpturing, his Dremel Moto-Tool will prove even more versatile.

There are three models of Dremel Moto-Tools—catalog numbers 260, 270 and 280. Each gives 30,000 r.p.m. performance. Accessories interchange in all. Nos. 270 and 280 units are identical in size and weight, but internally different.

The No. 260 model is primarily for light hobby-craft work. Either the No. 270 or the No. 280 power unit is the one you should use for gunsmithing jobs.

Of the two, the more powerful No. 280, with ball bearings, is undoubtedly the best buy. Made to

withstand the strain of day-to-day industrial use, the No. 280 will probably never be worn out by the average home gunsmith. In kit form (kit catalog listing No. 281), the industrial grade No. 280 power unit is boxed (as are all kits) with a wide variety of accessories. Included are high-speed steel cutters, emery and silicon grinding wheels and points, wire and bristle brushes, felt polishing tips, sanding discs, drum sander and bands, mandrels, cutting wheels, dressing stone, collet wrench and 1/32-inch, 3/32-inch, and 1/16-inch collets. For special or unusual job requirements, specific types of cutters and grinding wheel points can be had.

The manufacturer is Dremel Mfg. Company, Racine, Wisconsin 53401. You'll find the firm's free catalog interesting, and the model of your selection downright amazing in performance. Chances are you can purchase a Dremel Moto-Tool locally from a large hardware store or trade tool supplier.

There is no reason why you cannot do creditable home hobby gunsmithing; in fact, in these times of curtailed gun factory servicing, it is almost a necessity.

IT IS A COMMON ASSUMPTION that America is the No. 1 participant nation in shooting sports, and that American shooters dominate such competitive fields. Not so, as a quick review of *WORLD ALMANAC* shooting records will show!

Actually, per capita, Sweden is way ahead of the United States in shooting interest. It is a country that encourages its civilian population to engage in shooting sports, and particularly to become familiar with its military model rifles. As incentives, excellent shooting ranges are maintained for civilian practice and competitive team shooting, and excellent rifles and coaching are provided.

A lot of ammunition is expended every month—much of it of Swedish manufacture in the big Norma Projektilfabrik plant at Amotfors.

To keep participation costs low, many shooting clubs save fresh-fired cartridge cases and ship them back monthly to the Norma ammunition plant for reloading. There, cases are closely examined, cleaned, polished, and reloaded to the standard of new ammunition.

Here in America, countless home reloaders perform similar basic reloading of Norma cases, but on much smaller scale. For years, Norma ammunition brass, by reason of its high quality, strength, and machined tolerances, has been a favorite among serious home reloaders. For its cartridge cases, Norma uses brass alloying about 72% copper and 28% zinc, specially heat treated for performance flexibility.

The Swiss are true riflemen and hunters. They not only learn to shoot offhand on target practice ranges but know the advantage of taking some sort of rifle rest when attempting long shots at small

game targets. In fact, when hunting, many carry a rifle rest with them—simply, an alpenstock, or European walking stick. The smooth, straight staff, about 5½ feet long, doubles as walking and climbing aid and as an improvised rifle rest.

In latter use, the stick is set upright and supported by finger wrap-around of the same hand that cradles rifle fore-end alongside the stick. The aid can be used almost anywhere one hunts with a rifle. Its steadying influence makes slow-fire, long-range shots less chancy. (An American version can be made from a well-sanded 5½-ft.-long hoe handle.)

WHEN JOHN M. BROWNING designed the Colt .45 M1911 autoloading pistol, adopted by the U. S. Army as its standard sidearm, he created a heavy-framed, extremely durable, hard-hitting handgun. The cartridge selected for it was one of rimless, straight case type, seating a 230-grain jacket bullet giving muzzle velocity of 850 feet per second and muzzle energy of 369 foot-pounds.

The combination of autoloading pistol and heavy, stubby cartridge was originally intended solely for the military, with average firing use from point-blank range to a long 50 yards. Beyond 50 yards, users of early Government issues had to introduce considerable "Kentucky windage" when aiming, and be downright lucky to hit. However, the damaging effect of bullets that did hit enemy targets, as well as the psychological effect of the handgun's noise blast, quickly earned the M1911 a combination of awe and respect.

When empty of cartridge magazine and cartridges, the M1911 autoloading pistol gave the impression of being notably heavy at the muzzle end. However, once a fully loaded clip was inserted, its weight tended to counterbalance the feeling of muzzle heaviness, and gave the handgun a seemingly natural pointing quality.

The rugged handgun met military field needs admirably by also being easy to disassemble and reassemble without tools.

Besides Colt, Remington, Ithaca and others made the handgun for use in World War I, and again during the years of World War II.

In 1921, Government-contract makers of the handgun incorporated certain changes recommended by Army Ordnance. The portion of the trigger that extends into the trigger guard was shortened and the grip shape was changed by adding a hump to the back of the mainspring housing. The new version was designated "Model 1911A1."

Even so, the new model proved no great shakes for accuracy. When post-World War I users elected to fire the .45 autoloader in friendly pistol match competition, they quickly found that the service handgun was not up to serious match target shooting performance. One reason for poor accuracy

was the loose fit then given the slide housing over the fixed barrel, and sloppy production line fit of other parts. Target shooting with an "as-issued" Model 1911A1 of the period invariably proved disappointing.

Primarily for use by Service teams competing in the national pistol matches at Camp Perry, Army Ordnance developed and introduced a "National Match" model of the same basic design but with parts machined to closer tolerances and given addition of an adjustable rear sight and precision-fitted lock work.

Qualified professional gunsmiths soon began to accurize standard model handguns, to comply with the demand of civilian users for better target accuracy from the "as-issued" model of the Government .45 caliber autoloader. California gunsmith Frank Pachmayr was one of the first to do such accurizing work. He is now world famous for his custom gunsmithing on .45 caliber autoloading handguns.

In 1951, a commercial version called the "Commander" was made for sale to sportsmen who liked the Army Ordnance model handgun but not its total weight and length. The "Commander" model's receiver, as well as the mainspring housing, was made from high tensile aluminum alloy. Overall gun length was also reduced. With minor improvements, the "Commander" model is still made.

Currently popular are the Colt "Gold Cup National Match" and the "MK/IV Series '70 Colt Government" models, incorporating modern improvements as well as precision fitting of parts.

In shooting the .45 caliber autoloading handgun—or any handgun, for that matter—it is important that the handgun's grips give correct hand contact and comfortable fit.

Frank Pachmayr, head of Pachmayr Gun Works, 1220 Grand Avenue, Los Angeles, California 90015, is now offering handgrips made of resilient neoprene rubber, with patented lightweight steel inserts moulded into each side. The new grips, packaged under identifying "Signature" model label, can be used on any commercial version of the Government model .45 autoloader, the slightly different "Commander" model, or any of the "Gold Cup" series productions.

The wraparound design of the Pachmayr one-piece moulded grips not only provides a checkered front strap, but gives maximum gripping surface for either a right- or left-handed shooter. I can vouch for the fact that the new Pachmayr "Signature" handgun grips feel comfortable and tend to naturally fit the gun holding hand. The grips give the shooter a feeling of steadiness and positive handgun control. Installation is easy and fast; no gunsmithing alterations are necessary for perfect fitting to handgun frame. ●

Tilapia Recipes

It appears that the proverbial silver lining to at least one gray cloud has been found.

Call it Nile perch, Nile bream or tilapia, the exotic fish that now calls many of the fresh water lakes of Polk County home has been considered anything but an asset up until the present time.

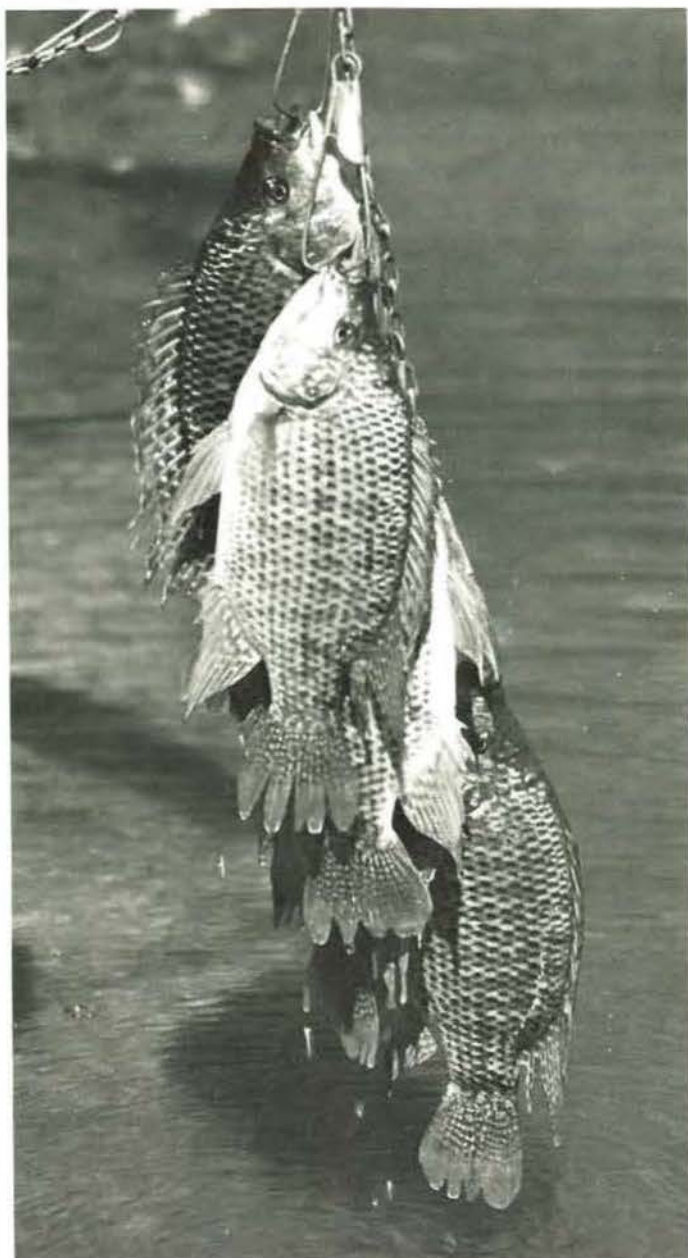
But since the Nile perch seems destined to become a permanent part of Florida's fresh water fauna, certain positive aspects of its existence have been recognized. For one thing, the species is highly prolific. For another, tilapia grow rapidly in the eutrophic lakes of south Florida. They do not, however, do well in better quality lakes where

sport fishes predominate. Now for the good news: This newcomer to the state can be excellent eating fare—and it is available in fish markets as well as in many lakes.

But how do you cook 'em?

In an effort to find ways to present the tilapia in the most flattering culinary light, the Game and Fresh Water Fish Commission sought the assistance of the Marketing Section of the Florida Department of Natural Resources. Any one of the recipes their food specialists supplied will prove that, cooked just right, these fish make some very good eating. Here they are:

TILAPIA or NILE PERCH



Nile Perch German Potato Pancakes

- 1 pound Nile perch fillets or other fish fillets, fresh or frozen
- 3 eggs, beaten
- 2 tablespoons flour
- 2 tablespoons grated onion
- 1 tablespoon chopped parsley
- 2 teaspoons salt
- Dash nutmeg
- Dash pepper
- 2 cups finely grated raw potatoes
- Applesauce

Thaw frozen fillets. Skin fillets and chop finely. Combine all ingredients except applesauce; mix thoroughly. Drop 1/3 cup fish mixture onto a hot, well-greased griddle or frying pan. Flatten slightly with a spatula. Fry until brown on one side; turn carefully and brown the other side. Cooking time approximately 6 to 8 minutes. Drain on absorbent paper. Keep warm. Serve with applesauce. Serves 6.

Oven-Barbecued Nile Perch

- 2 pounds Nile perch, or other firm fish fillets, fresh or frozen
- 1/2 cup cooking oil
- 1 teaspoon salt
- Dash pepper
- 1 clove garlic, minced
- 1 cup shredded Cheddar cheese
- 1 cup fine bread, cracker or cereal crumbs
- 1 cup favorite commercial barbecue sauce

Thaw frozen fish, and cut into 6 serving portions. Combine oil, salt, pepper, and garlic. Mix cheese and crumbs. Dip each piece of fish into oil; drain; roll in cheese-crumbs mixture. Arrange fish in well-greased baking pan. Bake in hot oven, 450°F., for



Photos By Wallace Hughes

By **ROB NORDIN**

7 to 10 minutes. Heat barbecue sauce. Spoon $\frac{1}{2}$ of sauce over fish. Keep remaining sauce hot. Cook fish an additional 5 minutes or until it flakes easily when tested with a fork. Serve with remaining sauce. Makes 6 servings.

Note: Fish may be served with sauce on large, buttered, toasted hamburger buns.

Scandinavian Nile Perch

- 6 pan-dressed Nile perch or other small fish, fresh or frozen
- 1 teaspoon salt
- Dash pepper
- 1 cup chopped parsley
- $\frac{1}{4}$ cup butter or margarine, softened
- 1 egg, beaten
- $\frac{1}{4}$ cup milk
- 1 teaspoon salt
- $\frac{3}{4}$ cup toasted dry bread crumbs
- $\frac{1}{2}$ cup grated Swiss cheese
- 3 tablespoons melted fat or oil

Thaw frozen fish. Clean, wash, and dry fish. Sprinkle inside with salt and pepper. Add parsley to

butter and mix thoroughly. Spread inside of each fish with approximately 1 tablespoon parsley butter. Combine egg, milk, and salt. Combine crumbs and cheese. Dip fish in egg mixture and roll in crumb mixture. Place on a well-greased cooky sheet, 12 x 15 inches. Sprinkle remaining crumb mixture over top of fish. Drizzle fat over fish. Bake in an extremely hot oven, 500°F., for 10 to 15 minutes or until fish flakes easily when tested with a fork. Serves 6.

Chipper Perch

- 2 pounds Nile perch fillets or other fish fillets, fresh or frozen
- $\frac{1}{2}$ cup Caesar salad dressing
- 1 cup crushed potato chips
- $\frac{1}{2}$ cup shredded sharp Cheddar cheese

Thaw frozen fillets. Dip fillets in salad dressing. Place fillets in a single layer, skin side down, on a baking pan, 15 x 10 x 1 inch. Combine crushed chips and cheese. Sprinkle over fillets. Bake in an extremely hot oven, 500°F., for 10 to 15 minutes or until fillets flake easily when tested with a fork. Makes 6 servings.

Italian Potato-Coated Fish

- 1 $\frac{1}{2}$ pounds Nile perch fillets, fresh or frozen
- 1 teaspoon salt
- $\frac{1}{4}$ teaspoon pepper
- 1 egg, beaten
- 1 tablespoon water
- 1 cup instant mashed potato flakes
- 1 envelope (.7 oz.) dry Italian salad dressing mix

Thaw frozen fish. Skin fillets. Season fish with salt and pepper. Combine egg and water. Combine potato flakes and dressing mix. Dip fish into egg mixture, then roll in potato mixture. Place fish in a heavy frying pan which contains about $\frac{1}{8}$ -inch of fat, hot but not smoking. Fry at moderate heat. When fish is brown on one side, turn carefully and brown the other side. Cooking time approximately 10 minutes, depending on thickness of fish. Drain on absorbent paper. Makes 4 servings.

In 1961, a breeding stock of blue tilapia was transferred surreptitiously to waters outside of a Commission experimental area. Now the tilapia (also called Nile perch), is common, and extending its central and south Florida range. Not readily taken by the conventional hook and line methods, the snag hook and cast net are usual means of catching tilapia for home use. They may reach 4 or 5 pounds in weight, but most taken are considerably smaller than this. Under permit, tilapia are seined in quantity and marketed. Drawbacks aside, they are quite tasty when well prepared.

AT LAKE TOHOPEKALIGA, near Kissimmee, data continues to accumulate to show that ambitious drawdown of the big lake has reversed the predrawdown decline in the fishery, and with a vengeance. Sampling during October-November 1973 showed a "standing crop" of 243 pounds of sportfish per acre in the shallow, shoreline zone, and 65 pounds per acre in the open water portions.

FISHERIES TECHNICIAN Ken Jones of the South Florida regional staff was given what rod and reel addicts would call a dream assignment. In an effort to encourage sport fishing on the rapidly booming striped bass population in Lake Hunter, near Lakeland, Ken was given the chore of finding the key to putting stripers in the boat via sport gear. After a slow start, he finally zeroed in on the linesides by drifting live shiners near the bottom. One 3-hour trip yielded five fish weighing from 3 to 4½ pounds. Another jaunt resulted in nine stripers going to 5 pounds, caught in a 3-hour session. The resulting publicity seems to have moved things off dead center. Lakeland appears to be on the way to becoming the striped bass capital of Florida.

AFTER MORE THAN a quarter of a century of service with the G&FWFC, Mr. Willie Carr, superintendent of the Commission's Blackwater Hatchery at Holt, in the northwest Florida panhandle, retired on December 31. Willie's 27 years of dedicated efforts on behalf of Florida conservation were formally recognized during the January meeting of the Commission.

DENNIS AUTH, job leader heading a number of studies under the Game and Fresh Water Fish Commission's Stream Investigation Project, has been appointed executive director of the newly organized St. Johns River Management District. He assumed his new duties on March 15, 1974. Auth, who was stationed in Melbourne, had been with the Commission since 1967. In his new assignment he will be responsible for planning, recommending activities, and administering water management programs in the St. Johns River basin.

WHAT KEEPS LARGEMOUTH BASS from spawning in waters where there are too many bluegills or other panfish is the subject of a study underway at Richloam Hatchery. Prime suspect, according to biologist Dennis Holcomb, is a hormonelike material released into the water by the panfish as the result of overcrowded conditions. If this is the case, desensitizing the end of the olfactory nerve of brood bass with an electric needle to dull their

sense of smell may be the answer. Bass thus treated should proceed with spawning even in overcrowded ponds. The resulting increase in the largemouth population should be able to bring the bream under control in short order.

LAMARR WITT, of Lake City, fishing at the confluence of the Santa Fe and Suwannee Rivers on February 4, 1974, landed a 2.6-pound Suwannee bass. Measuring 15.5 inches total length, the fish is the largest of the species the Commission has on record.

The Suwannee bass (*Micropterus notius*) is a small, slender bass with a relatively small mouth for a member of the largemouth group. Specimens measuring over 12 inches total length are very rare.

IN THE RODMAN POOL area on the Oklawaha, aquatic plant growth continues to take over open water at a lively clip. Between May and November 1973, the height of the growing season, there was an increase of 730 acres in the area covered by aquatic plant growth. Three species accounted for most of this increase. Hydrilla boomed from 7 acres to 252, water lettuce from 0 to 160 acres, and pickerelweed from 22 to 180 acres.

AN IMPORTANT ACTIVITY in fisheries management is making areas accessible to fishermen. On Lake Okeechobee, where angling looms big in the recreation picture, Commission personnel this season saw to the cutting of some 75 miles of boat trails through the lake marsh. This mileage, connected with existing trails, resulted in availability of 110 miles of trails for fisherman and hunter access.

HOW LONG DOES IT TAKE to catch a bass? Ten weeks of creel census effort at famed Lake Okeechobee showed 3,834 man-hours were expended in boating 1,487 keeping-size largemouths. This means that, on the average, a fisherman could expect to land a bass for each 37 minutes of fishing. Fish from 11 to 16 inches long were most prominent in the landings, but sizes checked ranged from 10 inches up to 25 inches.

THE INTRODUCED TILAPIA, which has been much in the limelight in the South Florida Region, appears to be spreading out. Regional fisheries biologists recently confirmed the presence of the species in Starke Lake, near Ocoee. It is apparent that the species has successfully overwintered in Starke Lake, which has no apparent warm water inflow that would make winter conditions easier on this warm water exotic. According to Fisheries Biologist Bob Schneider, three bodies of water in the region have been invaded by tilapia, and from all indications, the number will continue to grow. ●



CONSERVATION SCENE

Strip Mining Opposed

AMONG THOSE CONSERVATIONISTS who have voiced opposition to the proposed strip mining for phosphate in the Osceola National Forest is Florida Representative Bill Gunter, member of the Forest Subcommittee of the House Agriculture Committee.

Such mining, he said, "would represent an unconscionable threat to the Floridan aquifer on which the state is heavily and absolutely dependent, and at a time of increasingly serious indications of overall fresh water shortages and the prospect of even more severe future scarcity."

Involved are leases covering 52,000 acres, or 33 percent of the 157,213 acres of federal land in the Osceola National Forest.

Withdrawals of water from the aquifer—some 20 million gallons of water a day would be required for the phosphate operation—would affect water systems over a large area. Approximately 34 per cent of the total National Forest watershed area tributary to the Suwannee River eventually would be mined, and approximately 31.5 miles of streams in the Forest would be bisected, causing interruptions and diversions of the normal stream flow.

In all, phosphate mining would turn 1/5 of the Forest into an industrialized area for at least 30 years and, with approximately 1/3 of the mined areas being left in water-filled pits, it can be assumed that an equal land area would be lost for land-based recreational opportunities such as hunting, camping, picnicking, and hiking.

With Jacksonville, population 550,000, just 35 miles to the east, an ideally-located recreation area for that metropolitan area would be severely impaired.

"To take such risks when phosphate mining in this particular area is not only unnecessary but would yield only minimal returns Gunter said, "... I believe is unacceptable, both to the people of Florida — increasingly hard-pressed to conserve such basic resources as water and room available for recreation — and from the standpoint of any common sense planning and allocation of priorities."

The Real Facts

THOSE DEDICATED to the abolition of hunting for sport insist that hunters and wildlife managers are primarily responsible for the elimination of wildlife species. What are the *real facts*?

According to the Department of the Interior, 32 species of birds native to the 50 states are now extinct. Twenty-four of those lived in Hawaii and were never hunted by sportsmen. They succumbed to the predatory attentions of domestic cats and mongooses introduced by man to the islands. No sportsmen involved.

Of the remaining eight extinct species of birds, only two—the heath hen and the passenger pigeon—were ever hunted for

sport. The heath hen was eradicated by spreading civilization in the densely populated Northeast. The passenger pigeon was destroyed by market hunting and habitat change. Sportsmen were simply not a factor in either case.

Nine species of modern-times U.S. mammals are extinct. Only three such could have been pursued by hunting sportsmen—eastern elk, Merriam elk, and Badlands bighorn sheep. All were wiped out before 1910, during the settlement of their respective ranges. They were hunted for food by the pioneers, and for market, but they were long gone before sport hunting achieved any popularity in their range areas.

Having had absolutely no part in the extermination of any American wildlife species, the sportsman-wildlife manager partnership has been almost totally responsible for returning many species to healthy population levels, including elk, wild turkey, deer, pronghorn antelope, beaver, and wood duck.

Those are the *real facts*.

A New Fishing Guide

"THERE ARE MORE fishing experts per square mile in Florida than any other place in the country. I have learned much by listening to these experts." So says Tommy Anderson, of Tallahassee, in his book *THE COMPLETE GUIDE TO FLORIDA FISHING* (A. S. Barnes and Company, \$8.95). With over 25 years of Sunshine State angling behind him, the author certainly qualifies as an authority himself.

The real meat in this new fishing guide is in the "where" and "when" information put together
(Continued on next page)

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by Anderson, a real down-to-earth rod and reeler. A newcomer to the state, as well as the longer term resident, will find much of help and interest. Unlike some books in the field, Tommy assumes the reader already has a basic knowledge of fishing tackle and how to use it. With a minimum of window dressing, he launches into the all-important where and when of Florida fishing, both salt and fresh water.

The reader is exposed to such varied fishing experiences as teasing a smashing strike from a snook to dabbling a tiny shred of earth worm for mullet; from enticing a bonefish on the flats to bamboozling the much-maligned but scrappy—and tasty!—mudfish.

At first glance, the price seems a bit steep for a rather slender volume (153 pages) but the low-down on the best spots and times for top sport makes the investment a nominal one. A listing of artificial reef locations and salt-water fishing piers are useful additions to the text, which is also spiked with numerous photographic illustrations.

News For Conservationists

THE U.S. BUREAU of Sport Fisheries and Wildlife recently had some good news and some bad news for conservationists across the country.

First the bad news: according to results of a comprehensive year-long "wing-bone" study by the Bureau, lead shot is poisoning three times as many waterfowl as previously estimated. Using 20 parts per million as a danger threshold for lead, Bureau scientists found these levels exceeded in over 16 per cent of Pacific Flyway birds tested; Mississippi Flyway, over 13 per cent; Atlantic Flyway over 17 per cent; and Central Flyway birds, about 5 per cent. This data corroborates the research findings announced 10 years ago by Frank



Photo By Morrie Naggiar

Advice on building ponds is available in new free booklet

Bellrose, of the Illinois Natural History Survey. The levels of toxicity in some flyways, however, are three times greater than previously estimated.

Now for the good news: conversion from lead shot can show quick results in larger duck and goose populations. According to the Bureau's findings, the lead already present in the marshes will settle out of reach in a few years.

Massive waterfowl dieoffs due to lead shot poisoning have been reported for over a century. The problem begins when ducks, geese, and swans feeding along heavily-hunted marsh and lake bottoms swallow lead pellets along with seeds and grit. The lead shot then enters the gizzard along with food and small pebbles and is eventually absorbed into the bloodstream. Several organs deteriorate, including the liver, kidneys, and gizzard. While adequate food may be available in the area, the birds in effect starve to death.

Evidence clearly points to the use of nontoxic iron shot as the best available alternative to lead. The Interior Department is withholding a decision on a mandatory switch to iron shot until all study results and public com-

ments on the impact of a switch are in.

Spotlight On Ponds

PONDS, AND HOW TO BUILD, maintain and use them, are the subject of a new publication of the U.S. Department of Agriculture.

The 14-page illustrated booklet, *BUILDING A POND*, was written by the Soil Conservation Service in response to growing public interest in the subject.

The publication gives advice on selecting a site, building an embankment or excavated pond, the requirements for satisfactory pond spillways, sealing leaky ponds, and maintaining completed ponds. The various uses of ponds for livestock, fire protection, fishing, recreation, irrigation, and wildlife habitat are also discussed. Photographs, maps and diagrams help to illustrate some of the concepts.

Single copies of *BUILDING A POND*, FB 2256, are available from the Office of Communication, U.S. Department of Agriculture, Washington, D.C. Additional copies are available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at 25 cents a copy.



HOW'S YOUR BOATING IQ?

By The American National Red Cross

- What is the leading cause of boating fatalities?
 - Collisions
 - Explosions
 - Drowning
- How many flotation devices should you carry on your boat?
 - None
 - One each for weak swimmers or nonswimmers
 - One for every person aboard
- You can put as many people in your boat as it will carry. True ☐ False ☐
- The size of your outboard motor doesn't matter as long as you can fit it on the transom. True ☐ False ☐
- In small boats should you allow your passengers to sit on the bow or gunwales? Yes ☐ No ☐
- If you are in a small boat that capsizes or is swamped what should you do?
 - Swim for the nearest shore.
 - Stay with the boat. It will usually float. Wait for help. *But if you are in dangerous or extremely cold water, try to get to shore as fast as possible.*
- Boatmen should know first aid. True ☐ False ☐
- If a man falls overboard and can swim, you toss a lifesaving device to him, stop the boat, and let him swim back to it. True ☐ False ☐

SCORING

1. (c)
 2. (c)
 3. False
Don't overload your boat. Keep passengers to a safe number. Comply with the capacity rating plate.
 4. False
Don't overpower your boat. Ask your dealer what horsepower is safe for it and comply with the power rating plate attached to the hull.
 5. No
Don't let passengers stand up in a small boat or sit on the gunwales or bow while you are under way.
 6. (b)
 7. True
Since boats often operate far from medical help, all boatmen should know (a) how to give artificial respiration, (b) how to stop severe bleeding, (c) first aid for fractures, and (d) other skills they learn in a Red Cross first aid course.
 8. True
Every skipper should know the swimming abilities of those on board. Rescue procedure is based on the ability of the person in the water to help himself. Special procedures are needed if the overboard victim is a weak swimmer or nonswimmer.
- No matter what your score, a Red Cross boating course will help you become safer on the waterways—whether you're a passenger or an operator. Call the Red Cross today and find out when the next class is offered in your community.
- If you answered 0-3 correct, you could be a danger to yourself and others.
If you answered 4-6 correct, you're average, but not good enough, especially if you own or operate a boat.
If you answered 6-8 correct, give yourself a pat on the back.

ANSWERS



Here Are the Steps To Restore Breathing and Save Lives

Would you know what to do if someone stopped breathing due to drowning or injury in an accident? Or because of sudden illness, such as a heart attack?

Thousands of persons are alive today because someone close at hand knew what to do in the first few minutes after an accident or illness occurred. Many others can be saved if the simple steps of mouth-to-mouth resuscitation taught by the American Red Cross are applied immediately.

Millions of Americans have learned the mouth-to-mouth procedure in safety courses taught by the Red Cross, which this year is observing the fiftieth anniversary of its National Aquatic Schools. Others have applied the method successfully after having seen it demonstrated on television or in newspapers. These are the basic steps to follow:



If foreign matter is visible in the mouth quickly wipe it out. Then tilt the victim's head back.



For an adult, cover the mouth with your mouth, pinch the nostrils shut, and blow vigorously. For a small child, place your mouth tightly over his mouth and nose and blow gently (shallow puffs for infants).



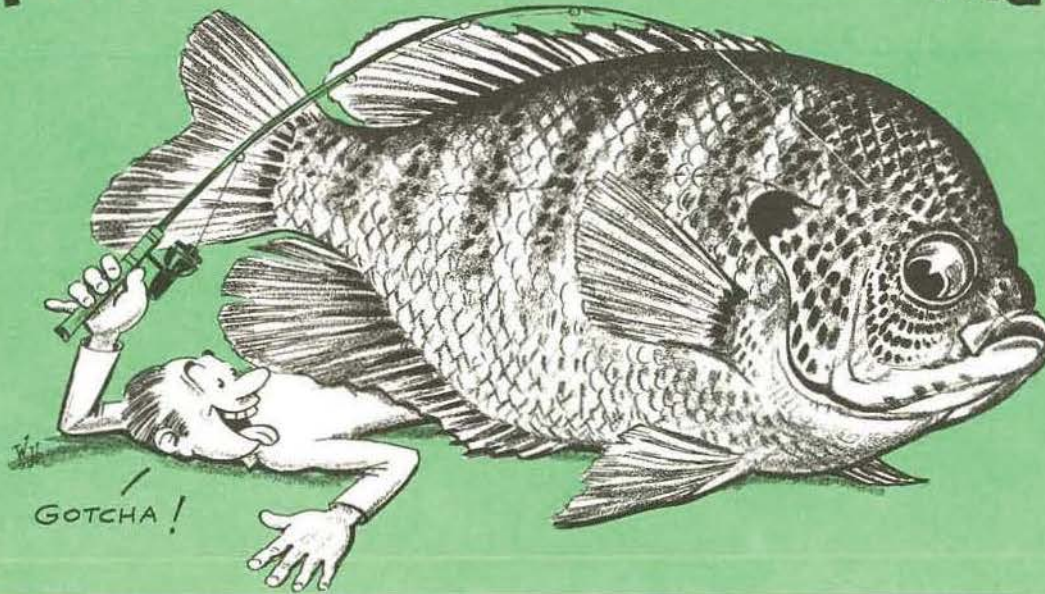
Remove your mouth, turn your head to the side, and listen for the return rush of air. Repeat for adults at the rate of 12 times a minute (every 5 seconds) or for children at 20 per minute (every 3 seconds).

If you are unable to get air into the lungs of the victim, recheck the head and jaw position. Then repeat the blowing effort.

If you suspect that foreign matter is blocking the airway, turn an adult victim on his side and slap sharply between the shoulder blades. A small child should be inverted over the forearm, and firm blows should be delivered between the shoulders.

THE AMERICAN NATIONAL RED CROSS

For that BIG ONE that didn't get away!



WHO
CAUGHT
WHO?



ELIGIBILITY REQUIREMENTS SPECIES

LARGEMOUTH BASS

.....8 pounds or larger

CHAIN PICKEREL

.....4 pounds or larger

BLUEGILL (BREAM)

.....1 1/2 pounds or larger

SHELLCRACKER

.....2 pounds or larger

BLACK CRAPPIE

.....2 pounds or larger

RED BREAST

.....1 pound or larger

All fish must be taken from the fresh waters of the state of Florida, as defined by the Game and Fresh Water Fish Commission. Fish must be caught on conventional fishing tackle, with artificial or live bait, in the presence of at least one witness.

The catch must be weighed and recorded at a fishing camp or tackle store within the state by the owner, manager, or an authorized agent of the respective establishment.

FLORIDA WILDLIFE'S FISHING CITATION

is available without charge, to any and all subscribers to Florida Wildlife Magazine, and their immediate families, who catch any of the fresh-water game fish of the prescribed species and size requirements. Citation, showing recorded date of the catch, will be mailed to the applicant upon receipt of the following application form that has been properly filled out and signed.

Only fishing citation applications received within 90 days from date of catch will be honored.

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The Editor, FLORIDA WILDLIFE

Date _____

Game & Fresh Water Fish Commission, Tallahassee, Fla.

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print) _____

Address _____

City _____ State _____ Zip No. _____

Species _____ Weight _____ Length _____

Type of Tackle _____

Bait or Lure Used _____

Where Caught _____ in _____ County

Date Caught _____ Catch Witnessed By _____

Registered, Weighed By _____ At _____

Signature of Applicant _____

CUT OUT AND SAVE THIS APPLICATION BLANK



Young American Egrets

Photo By Florida State News Bureau

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